Post-graduate Lecture
ON SOME
GENERAL PRINCIPLES OF THE DIAGNOSIS OF DISEASES OF THE NERVOUS SYSTEM.

Delivered at the National Hospital for the Paralysed and Epileptic.

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GENTLEMEN,—If we look back over the progress of medical science, three epochs of discovery stand out in special salience, contrasting, in the steepness of the rise in knowledge they present, with the more gradual progress of other branches and of the same subjects at other times. These are, first, the revolution in the conception of diseases of the heart and circulation which Harvey's great discovery entailed; secondly, the penetrating extension of knowledge of all the thoracic diseases which was effected by the invention of the methods of auscultation and percussion, and the discoveries which followed that invention; and, thirdly, the enormous advance in our knowledge of the nervous system and its diseases which the last quarter of a century has witnessed. This has been largely due to the development of microscopical research, in some degree to the progress of experiment, but very much to the extraordinary increase in the capacity for investigation which the general progress of science has produced, and to the fertile field presented by these diseases for the exercise of that faculty. The results of the application of the chemical and microscopical investigation to the urine and the transforming revelations made through the invention of the ophthalmoscope and the laryngoscope, are hardly less remarkable, but their range is more limited than those of the progress effected during the three great epochs in discovery that I have mentioned. The last of these concerns us in a special manner, because it has taken place in our own time and is still in active progress. It is to certain consequences of it that I desire to direct your attention to-day—consequences that are of the utmost importance to the practitioner in his daily work. How great, how wide and profound, has been the change that our knowledge of diseases of the nervous system has undergone cannot, indeed, be realised by all members of our profession. A large number of those who studied before the change took place have been unable to follow the new development of knowledge,—the successive stages of which have followed each other with a rapidity almost bewildering, and the difficulty has been enhanced by the freedom with which investigators have revelled in a novel nomenclature, embracing alike the new and the old, in part essential, but in still larger measure superfluous. The exigencies of practice, with its increasing demand on the time and energy of the practitioner, and its unceasing echo of the cry (shall I say of a colleague's daughter?) "Give, give!" has made it often impossible for him to attempt, or, attempting, to continue, to follow the successive discoveries. Without a knowledge of their scientific features he has generally found it impracticable to use them, and so he has either rested content with that which he learned of old, or has gained a fragmentary knowledge that has served only to mislead him. Those, on the other hand, who have learned the subject as we have it now, cannot realise the change, for they have but one of the terms needed for the comparison; while the large number of practitioners who studied medicine during the period in which the change was taking place, learned a little of the new and a good deal of the old, and acquired a mixture containing many incompatibles, with the common consequence that may be described in terms of metaphor, not inexact, as "mental turbidity."

To clear your minds and get rid, as far as may be, of all that prevents a clear vision of disease, to learn how most usefully to see disease through the clearer media, and, above all, to see it in such a way as shall enable you to treat it with such advantage as is attainable—these, I conceive, are the objects that bring together here the members of this post-graduate course. But I am not sure that the students of to-day, or at least many of them, who have acquired the latest and fullest knowledge of these diseases, have learned, in equal measure, how to use their knowledge, or are free from the need of that training in method which the practitioner feels so keenly. The reason for this, or at least the conditions that make it probable, you will perceive when I tell you the nature of the difficulty that is experienced and the character of the need that is felt.

Let me, however, first give you an illustration of the change that has come over our knowledge of diseases of the nervous system during the last quarter of a century. I remember, twenty-five years ago, listening to a lecture on "chronic spinal meningitis," given by one of the most competent teachers of the day, which presented the latest and clearest opinions on the subject. The malady, as described in that lecture, had no existence. In the case on which it was given, the membranes of the spinal cord were certainly in a perfectly normal state. The symptoms then thought to prove the existence of chronic meningitis are now known to depend solely upon changes within the spinal cord itself. The pathology had been inferred from analogy, but the new means of investigation we have since obtained, coupled with the more extensive and precise observation which I have mentioned as so salient a feature of recent progress, have proved that the analogy was false and the malady quite different from that which was supposed to exist. The symptoms which were then ascribed to chronic meningitis are, indeed, now known to manifest more than one distinguishable disease. But the chief source of practical difficulty is not the mere correction of erroneous inference, and the displacement of the work of fancy by ascertained fact; it depends on the vast increase in our knowledge of the anatomy and physiology of the nervous system and on the application of this to disease; it depends, further, on the revelation, effected by microscopical research, of the extent and variety of degenerative processes in all parts of the nervous system. It depends, lastly, on our ever-widening perception of so-called "functional," really nutritional, diseases for which no anatomical cause has yet been discovered, which have been distinguished or recognised by means of (1) the increased exactness of observation, (2) the aid received through the differentiation of processes formerly confused with these, but now known to depend on structural change, and (3) in consequence of the special indications afforded by the discoveries now being made of the vast range of influence of toxic agents on the nervous system. Can we wonder, then, that our knowledge has been changed, even to the point of transformation, and that those familiar only with the old should be almost lost in the mazes of the new? The practical effect of these changes is to render the customary methods of diagnosis wholly inapplicable to a large proportion of cases of disease of the nervous system, to render it useless, or more than useless in the case of a large number of the nutritional affections that are called "functional," and of the structural maladies that are called "degenerative," as well as many of the maladies that depend on the visible and conspicuous changes that are called "organic."

The student has to acquire his knowledge of all diseases by the method of "types," and the same method is employed in the practical diagnosis of most other maladies. Indeed, in the case of many, no other system of recognising the nature of a case could be employed than that of observing the correspondence of the symptoms, in character and course, with those of a certain form which is known by a special name. But when we turn to the diseases of the nervous system that I have indicated, we meet with a series of maladies the variety of which is almost infinite. When we consider the various structures comprised in the "nervous system," their diversity of function, the extremely numerous combinations of structure and function that may be deranged at the same time, all mutually acting and reacting to produce the manifestation of disorder; when we consider further the variety of nutritional and degenerative processes to which these structures are liable, and also the degree and extent to which they are influenced by toxic blood states—agencies that we are only beginning to perceive in their nature and diversity,—we can readily understand that it not only may be, but that it must be, true that the diseases we meet with are so numerous and so diverse as entirely to

baffle an attempt to range them under definite types, that can be designated by definite names. But in the series they form, there are here and there aggregations, as it were, in which the morbid process corresponds, at least in its chief features, varying only in minor points. These we treat as types, and call by names, and by them the student learns the general features of the classes of disease in which they occur; but they seldom stand alone or are marked off by any well-defined boundary. Intermediate cases connect adjacent groups—cases that combine the features of two or several, or present some characteristics of one and some of another, and very often symptoms that cannot be recognised as pertaining to any recognised type. Of these forms, numerous as they are, the student for the most part remains ignorant. He has enough to do to become acquainted with the more familiar groups, and the method by which he learns the features of these cannot take in the intermediate varieties. When he proceeds to practical work he soon finds himself confronted by cases the like of which he has never heard of, and which he cannot find described in any text-book of these diseases. If he attempts to identify them, to bring them under some recognised type, and to give them some definite name, he is at once and completely baffled. He is baffled of necessity, for the cases belong to no type, and no name can be given to them that does not involve more error than truth. It cannot be otherwise, for to constitute types and assign designations that would include even the chief of these varieties would be to multiply both types and names beyond the capacity of the human mind to learn, or its power to retain. In the case of these diseases, therefore—diseases that are so frequent as to make up at least half the cases of affections of the nervous system which the practitioner has to treat,—the method by which he has acquired his knowledge, and by which he is able to deal successfully with almost all other classes of disease, fails him entirely; and yet in most instances he has nothing to put in its place. "The old order changes"; but it is "giving place to new" with a slowness which, at the present day, is a source of perplexity and difficulty widely felt, and constitutes a really serious obstacle to the practitioner's work. That it is so—that I am not exaggerating the facts—will be, I am convinced, confirmed by most of those who bring to their work the earnest and thorough spirit which strives to understand the cases that have to be treated, which strives after light, and is not content merely to deal, in darkness, random strokes.

What, then, is the remedy? What new method of diagnosis can be adopted? Happily, there is a means of meeting the difficulty, before which its formidable features will vanish, and the ever-growing accumulation of facts, the ever-increasing variety of definite morbid states of the nervous system, however numerous, however complex, however unfamiliar, may be dealt with as readily, as surely, as the diseases of any other class, or as the affections of the nervous system that do correspond to types, and may be recognised by such correspondence. Indeed, I had almost said that the method I am about to recommend enables you to deal with these diseases more readily and more surely than the other. At least, it has the advantage of placing the practitioner at once in the position needed for the adequate and wise treatment of the malady so far as such treatment is within our reach.

The method you should adopt is this: Whenever you find yourself in the presence of a case that is not at once and completely familiar to you in all its details, forget for the time all your types and all your names. Deal with the case as one that has never been seen before, and work it out as a new problem, *sui generis*, to be investigated as such. Observe each symptom carefully, and consider its significance. Then put the several symptoms together, and consider the meaning of their combination, especially whether there is any one part of the nervous system at which disease might cause them all. Lastly, consider the way they came on, as indicating the nature of the lesion, comparing this with the evidence of their seat, and remembering also that their character may in itself tell you something of their probable nature. When described in the abstract, this may seem a lengthy process. It may even seem a formidable process. As a rule, it is neither. The common symptoms, even those presented by uncommon cases, are not numerous, so far as concerns their general character and actual nature. The question of localisation is only an application of the common physiology of the nervous system, of the facts that should be familiar to every student, and can be re-learned, if necessary, with ease, by every practitioner. All the knowledge needed for this method is that which every student gains, or ought to gain, in the course of his studies; it is only the mode of using the knowledge that is new and has to be acquired. But the student should remember the great importance of "keeping up" his physiology and anatomy of the nervous system, or at least those parts of it which are needed in practical work. There is no department of medicine that consists more largely of applied physiology and applied anatomy than these diseases. For this reason they should engage the attention of the student early in his hospital work, instead of, as is often the case, being relegated to a late period on account of their supposed difficulty—a period when his science has got "rusty," or has slowly vanished, until even its nomenclature awakens a mere echo from bare walls. As a matter of fact, much of the student's hindrance is due to this postponement. The application of his knowledge should be made to retain it.

But for the successful use of this method it is essential that the knowledge, though neither extensive nor profound, should be firmly grasped and boldly used. Herein lies the chief practical difficulty. Timidity is almost a greater hindrance to diagnosis than is ignorance. You must feel sure of the meaning of symptoms, you must weigh the evidence with care, and then you may and must feel confident that your conclusion is trustworthy. This confidence and boldness can only be acquired by familiarity with the process, by observing its use by others, and afterwards repeating it for yourselves, thus becoming so familiar with the language of disease that you can read it with ease, can see at once the meaning of its words, and perceive with readiness the significance of its sentences. It is by affording an opportunity for this that the attendance on the practice, especially the out-patient practice, of special hospitals, is of peculiar value to the student, whether pre-graduate or post-graduate. A series of cases of the same class pass before him, in each of which he can observe the character of the symptoms and the process of diagnosis, and thus he gains, in a short time, a familiarity with the features of disease, and a quickness in perceiving their meaning, that he could not obtain in a long period of work at a general hospital, where such cases are few and far between, and the lesson of one is more than half forgotten before another instance comes before him.

In all this method of dealing with unfamiliar maladies there is nothing that is not within easy reach of the average student or practitioner. If any difficulty is felt, it is only, as in so many subjects, the first step that costs a conscious effort. Once learned, the method becomes more easy with each repetition, and is acquired the more speedily if repeated under slightly varying conditions. Soon, its steps cease to be consciously felt, and in a short time even a student, who has been fairly grounded in the elementary knowledge, becomes able to use the method with precision, and succeeds, in four-fifths of the cases that would otherwise baffle him, in arriving at a diagnosis in which a physician, whose attention has been given for years chiefly to these diseases, can find little or nothing to change. Note, moreover, that the method indicated is that which the most experienced physician has himself to adopt in the case of a large proportion of the cases that come or are sent to him. So infinitely various are the morbid states of the nervous system, so diverse their manifestations, that a very large number of the cases seen are practically new, even to a man of the largest experience, and if asked he has to confess that he has not seen before any case precisely similar to, and often not one even approximately resembling, that before him. Yet, by employing this method, he is able to arrive without difficulty at a diagnosis as sure as when the malady is of a common type. The only difference between his work and that of the student is that the latter has to adopt the method, with scrupulous care, in a larger proportion of the cases that he sees. He has to deal with a larger number as essentially new problems, to be worked out *de novo*. If he does this, as I have said, his errors will be few and rare, and only a small proportion of the cases will baffle his efforts. But never forget the essentials of the proceeding. Remember that you must for the time discard entirely your types and names. When you have made your diagnosis in the manner I have described, then, and then only, may you

consider how far the case corresponds to a type and can be called by a familiar or unfamiliar name.

The last point suggests a common difficulty. The desire for a name is strangely strong in the case of the majority of patients. Unless their disease is designated, they go away unhappy, discontented, distrusting. "But you have not told me what is the matter with me" is their parting plaint. What are you to do? In a very large number of cases no recognised name can be given to the disease that does not involve more error than truth. A few patients are sufficiently sensible to endure the knowledge of the fact and be content with it. In the case of most, the best plan is to give them a descriptive designation, and to write it down, that there may be no mistake, or it will come back to you some day in altogether altered form, so changed that you do not recognise your own production. The descriptive designation need not necessarily be short, although often it can be, and it then satisfies as much, provided the words are unintelligible. "Cephalic dysæsthesiæ" makes many a sufferer content. "Paroxysmal neuralgic pains, due to damage to the third and fourth posterior spinal roots, owing to a stationary lesion of the intervertebral articulations," delighted one good woman whom I lately saw, and who earnestly desired to know what was the matter with her, no doctor, she said, having as yet informed her. But always adhere strictly to fact in these descriptions, and avoid words that are apt to mislead because used in various ways. If you use the term "sclerosis," for instance, the chances are that the patient will look up the word in some medical dictionary, will identify his malady with insular sclerosis, read, forecast his future, and become utterly miserable.

To sum up in a few words the necessary change. Discard in the first instance all attempts to identify or to name, and try instead to read the malady, tracing the symptoms to the seat of their cause, and discerning the nature of the morbid process by their character and course. The method has the great practical advantage of taking you at once to the elements that should guide your treatment, and of enabling you to treat wisely a case the like of which you have never heard of, and a name for which you may not know. Mind, I do not say that you need adopt this process in every case of disease of the nervous system that comes before you. There are many that do belong to familiar types, cases that are characteristic and perceived at once to be such—cases of common chorea, for instance, of idiopathic epilepsy, many forms of hemiplegia, and the like. But the method is needed in all unfamiliar maladies, and in all cases even of familiar aspect that present some unusual feature; often, such a feature, in the end, is found to indicate that the case merely resembles superficially that to which it seemed to correspond, and is really quite different in nature. How real and how extensive is the need for the change in method I have described can only be realised by those who have to correct the mistakes or supplement the deficiencies of those who first attempt to make a diagnosis of such cases as I have indicated. In many cases a practitioner candidly confesses his inability. I often receive a letter saying, "I cannot make out what is the nature of the disease; I have seen nothing like it before, and I cannot find its features described in any text-book." Yet the case, as a rule, readily yields to the application of the method I have described. More often, however, the practitioner has endeavoured to make a diagnosis by the familiar system of types, and has, as it were, forced the case into the receptacle that seemed to correspond most nearly to it, but into which it did not really fit, and has given it a corresponding name, more or less erroneous, and often ludicrously wrong. I abstain from giving you instances; the statement of the fact will suffice, and examples are so numerous that some one would probably find that the cap fitted him with unpleasing precision.

I should like to have given you some instances of the working of this method, but for this there is not time. You will find it easy and more useful to work out such examples for yourselves, beginning with familiar diseases, but treating them, for the occasion, as unfamiliar. I hope, however, shortly to give you in another lecture a series of examples of its use, although not nominally such, by describing and analysing some of the more important diagnostic signs, or "diagnostic guide-posts" as we may call them. Familiarity with these is of extreme value, and most of them will afford illustrations of the use of the method I have just described.

Clinical Lectures
ON
STRICTURE OF THE ŒSOPHAGUS,
WITH FOURTEEN ILLUSTRATIVE CASES, IN FOUR OF WHICH GASTROSTOMY WAS SUCCESSFULLY PERFORMED.

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LECTURE III. (*Concluded.*)

I HAVE now discussed at sufficient length the intra-œsophageal operations for the relief of stenosis, and we may now pass on to consider the other methods either of relieving the stricture or of introducing food through an artificial opening.

Œsophagostomy, or the establishment of a fistulous opening in the neck for the relief of stenosis of the gullet, was first suggested in 1645, but on account of the obstacles to performing such an operation without anæsthetics, and probably also from the erroneous belief in the dangers and difficulties in its execution, surgeons were deterred from adopting it until 1738, when it was for the first time successfully performed. The whole subject has been very fully discussed in a valuable and exhaustive monograph by Terrier,[1] which I would strongly recommend you to read. While twenty years ago, or even at a more recent date, the operation was looked upon as very dangerous, more recent experience has demonstrated that it is not only quite a legitimate surgical procedure, but, under favourable circumstances, one of very high value when resorted to for the removal of foreign bodies only. I cannot here refer to those instances in which œsophagostomy has been employed for the removal of foreign bodies further than to show you that a consideration of the statistics up to the present day gives most encouraging results. Dr. T. M. Markoe, in the *New York Medical Journal* of May 1st, 1886, says, referring to cases in which œsophagotomy was performed for the removal of foreign bodies: "I am indebted to my friend Dr. S. W. Gross of Philadelphia for the following statement, which he very kindly gleaned for me from his abundant statistical resources. The whole of the persons operated upon up to date (1886) is eighty-two. Of these cases, sixty-three were successful, and nineteen followed by death; of the eighty-two cases, the foreign body was found and removed in seventy-four, and of these fifty-seven recovered and seventeen died. The foreign body was not found in seven cases, and in one case it was found, but slipped into the stomach and passed per anum. ..... Of the sixteen fatal cases of œsophagotomy, eight are stated to have died of abscess provoked by the lodgment of the foreign body, two from exhaustion, two from septicæmia, one [of pneumonia, and the rest not clearly stated."

The operation of œsophagostomy is only suitable when the disease is situated at and limited to the upper few inches of the gullet, and where there is evidence that firm adhesions have not formed between the œsophagus and neighbouring parts. In some cases the stenosis is so complete that it is very difficult to introduce the point of a knife into the lumen of the tube; and, moreover, although it is easy to determine the upper limits of the stricture, it is seldom possible to make out where the lower margin is. Mr. H. A. Reeves, in the Transactions of the Clinical Society of London, vol. xv., p. 32, gives the following as his conclusions:—"1. That internal œsophagotomy being out of the question, and the stage for gradual dilatation being passed, and in consequence of the great mortality of gastrostomy, and also because of the more frequent occurrence of malignant stricture in the upper portion of the tube, œsophagostomy is by far the preferable operation. 2. That even in cases where the stricture is as low down as the manu-

[1] De l'Œsophagotomie Externe, Thèse de Paris, 1870.

brium sterni (its depth being rarely very great), œsophagostomy is indicated as a preliminary or exploratory operation; and if it be found that the little finger or sound cannot be got through the narrowing, gastrostomy may be performed. 3. That if it result that the opening in the œsophagus has been made below the stricture (as in most cases would be desired), the operation can be completed by stitching the mucous membrane to the wound edges, and the stricture may, if thought proper, be dilated through the opening at the time of operation or subsequently. 4. That if diseased œsophagus be reached, and no opening into it can be made through healthy walls, then it may be carefully perforated, either by the finger or the thermo-cautery. 5. Œsophagotomy has been many times done, and œsophagostomy several, and never have these operations caused any grave local or general symptoms, or, as operations, led to the death of the patient, whereas gastrostomy has proved most fatal. 6. The operation should be done on the left side of the neck, and a sound should, if possible, be passed, that of Vacca Berlinghieri being the best. The skin incision should be rather nearer the mid-line than that for ligature of the common carotid, and should extend from half an inch above the episternal notch to the level of the upper border of the thyroid cartilage. The surgeon should stand on the left of the patient, looking obliquely down and across his or her body. A tube with a funnel-shaped end should be passed and tied in place, and nourishment administered as soon as the tendency to vomit caused by the anæsthetic has passed off. It is necessary to make the opening in the œsophageal walls with a sharpish stab, to prevent the loose mucous membrane being pushed before the knife. The edges of the wound may be stitched up, and care taken that no food gets into it. 7. The operation should be undertaken before the patient's strength is much exhausted, and even before obstruction is complete, because, frequently, attempts to swallow produce spasmodic suffocative dyspnœa, as in the first case related. 8. In severe cases of simple fibrous or syphilitic stricture in the nuchal or upper thoracic portion of the tube, œsophagostomy is indicated, as then the operation might be made curative as well as palliative. 9. Internal œsophagotomy must be limited to an extremely small percentage of cases, and some think it not justifiable, and excision of the diseased part of the œsophagus is yet in its merest infancy, so that œsophagostomy is the best resource left us, and the operation, if performed with care, is not very difficult."

The question of what operation should be employed is so important that I will not hesitate to discuss in detail the points raised by Mr. Reeves. From his own showing œsophagostomy is only suitable for those cases in which the disease occupies the upper part of the canal, and he says that this portion of the gullet is most frequently attacked, but unfortunately he does not state very clearly what he means by the upper portion of the tube. From what has been said in a former lecture, you will observe that I have come to the conclusion that the most common spot to find the primary tumour is immediately behind the cricoid cartilage; so that, if the patient presents himself to the surgeon sufficiently early, a successful œsophagostomy may be performed. But, as a rule, the aid of the surgeon is not asked until the disease has extended beyond the limits just mentioned. When the patient is seen at an early stage and the healthy œsophagus can be exposed below the site of the disease, so that the healthy mucous membrane can be stitched to the skin, then I think œsophagostomy may be employed. But to make an incision in the neck, and through the tumour into the lumen of the canal, seems to me unjustifiable when gastrostomy may be performed. You will therefore perceive that the operation is very limited in its application. Of the cases which I have brought before you, in not one of them could it have been performed in the hope of having a satisfactory result. If, for example, in the cases of Mrs. C—— (Case 4) and W. F—— (Case 3), I had opened the œsophagus in the neck, the probability is that within a few weeks I would have had to contend with a large fungating mass protruding through the fistula, whereas by performing gastrostomy the wound is far removed from the site of the tumour. Before concluding the discussion of this subject it would be advisable to refer to statistics, and in doing so I may say briefly: observe that out of twenty-nine cases operated on by œsophagostomy ten lived over one month, while the great majority of the remaining nineteen died within a week of the operation. The most successful case recorded is one operated upon by Hadlich[2] in 1880; the patient was sixty years of age, and was suffering from severe dyspnœa, the cause of which is not stated, and no necropsy was permitted, when the patient died thirteen months after the operation. With such unfavourable results it is not surprising that œsophagostomy has fallen into disuse.

In performing œsophagostomy the patient should be placed upon his back with the head and shoulders slightly raised, and, an anæsthetic having been administered, the face should be turned to the right. The surgeon, standing to the left of the patient, should then make an incision through the skin and subcutaneous tissue three or four inches long, along the inner border of the left sterno-mastoid muscle. The superficial fascia, the platysma myoides, and the deep fascia should then be divided, the inner edge of the sterno-mastoid exposed, and the muscle drawn outwards and upwards by a broad retractor, so that the carotid sheath is exposed to view and held to one side by an assistant. The connective tissue having been separated with the finger or a blunt instrument, care being taken not to injure the superior or inferior thyroid arteries or the recurrent laryngeal nerve, the left lobe of the thyroid gland and the trachea are exposed. These structures should be drawn forwards and to the right by a second assistant, when the lower part of the pharynx and œsophagus will be seen lying behind. In cases for which œsophagostomy is required, a tube cannot be introduced through the mouth, so that the operator is not assisted, as in œsophagotomy, by its presence in the canal. When the gullet is found, an incision should be made in its wall. If the operation be undertaken for malignant disease, the lower down the opening is made the better, and if possible the margins of the mucous membrane should be carefully stitched to the edges of the cutaneous wound. In cases of cicatricial stenosis the incision should be made immediately below the stricture. A soft flexible tube should be introduced, and kept in position with sticking plaster, while a drainage-tube may be passed through the lowermost limits of the wound and the edges united by sutures. The after-treatment must be carried out with great caution, special care being required in the introduction of the feeding-tube. A good plan is to have a soft curved elastic tube, from 4 in. to 5 in. long and of the size of a No. 9 bougie, with a shield the same as a tracheotomy tube, fixed in permanently, and through which, when the patient is fed, a soft inner tube of smaller size is passed into the œsophagus. This avoids the danger of lacerating the wall of the œsophagus or of adjacent tissues.

You may reasonably ask me, Is it not possible, in cases where the carcinomatous growth is situated high up, as in those of W. F—— (Case 3) and Mrs. C—— (Case 4), to excise the growth and remove the whole of the disease? When the disease is limited to that part of the œsophagus immediately behind the larynx, and there is no involvement of lymphatic glands, then one might consider the propriety of performing a radical operation with the object of attempting a cure. In neither of the cases just mentioned could such a procedure be thought of; for, as is usually the course of events in such circumstances, both patients allowed the disease to advance too far before they were seen. This is, however, not always the case, and the enterprising surgeon has not been always satisfied by simply supplying the patient with food through a wound in the neck or stomach, but he has on several occasions attempted a radical cure by excising portions of the œsophagus. One of the most successful œsophagectomies was performed by Czerny in 1877, when he excised a small portion of the canal along with a carcinomatous growth with a good result. The lower end of the gullet was united to the wound, and after four months the patient fed herself so conveniently through the fistula in the neck that she refused to have a subsequent operation performed for uniting the divided ends of the œsophagus. Novaro, Billroth, Israel, and von Bergmann also performed this operation, and their patients lived for seven weeks, four weeks, seven days, and one day respectively. Dr. Ashhurst, in his statistics, mentions twelve instances in which œsophagectomy was performed, and he states that eight proved fatal, giving therefore a mortality of 66 per cent. Œsophagectomy has therefore been practically abandoned, unless in very exceptional cases.

The first occasion in which gastrostomy was performed was for the removal of a knife which had been in the

[2] Deutsche Zeitschr. f. Chir. 1882, Bd. xvii., p. 138.

stomach for six weeks. Shovel operated in 1635 by making a vertical incision through the left hypochondrium an inch and a half below the ribs. The wound healed well. Between 1635 and 1849 no cases of gastrostomy are recorded. In the latter year Sédillot operated unsuccessfully for cancer of the œsophagus, and from that time until 1876, when Verneuil obtained the first success, the recorded cases constitute an unbroken series of failures. Since 1876, for cicatricial stricture alone, I find 48 cases of gastrostomy recorded, giving 25 recoveries and 23 deaths within a month of the operation; and for malignant disease, 280 operations have been performed, with 126 recoveries and 154 deaths within a month of the operation. Within the last few years gastrostomy has been more successful, probably because greater care has been bestowed upon details, and the operation has been resorted to at an earlier stage in the disease. For example, Knie[3] has operated upon 13 cases with only 3 deaths, and Credé[4] upon 26 cases with 4 deaths.

I cannot occupy time in discussing statistics in detail, or in giving you references, but I would like to tell you the facts which have been impressed upon me in studying the subject, so that you may be guided, as I have been, to know when to operate. In the large majority of the unsuccessful cases the operation was performed too late, and hence we find that a considerable number of the patients succumbed to shock within twenty-four hours, while a large percentage also died from exhaustion, inanition, or extension of the disease a few days after the operation. Within recent years comparatively few deaths have been caused by peritonitis, pneumonia, or septicæmia. The statistics which I have now produced give a very different result from those collected by Verneuil, and published in 1879. He then showed that out of 30 cases in which gastrostomy had been performed for malignant disease, only one survived a month. On the other hand, I find that since 1884 out of 113 cases recorded 80 have lived over thirty days. The most successful cases have been operated upon in one instance by James Murphy,[5] and in another by William Whitehead. The first of these patients lived for 403 days, while the other was alive at the end of the thirteenth month.[6] The operation of gastrostomy, which you have seen me perform successfully on three occasions this session, is the one most frequently employed in cases of stricture which are impermeable to bougies, and in malignant disease. As you observed, the method of operating was as follows: While the patient (take for example Case 3) was under the influence of chloroform an incision was made through the abdominal parietes an inch below and parallel to the left costal cartilages. The incision was an inch and a half long, and extended outwards and downwards from the margin of the left rectus muscle; with some difficulty, on account of the complete collapse of the organ, the stomach was felt. About a couple of square inches of the stomach wall were dragged through the incision in the parietes. A circle of sutures, each including about a quarter of an inch of stomach wall, was passed through the serous and muscular coats. The radius of this circle was about one-third of an inch. Each suture overlapped its neighbours by about one-eighth of an inch, so that when they were all introduced they resembled in form the tyre of a wheel. After all the sutures had been inserted in the stomach wall, the free ends were passed through the subcutaneous tissue and skin and tied externally, so that when the operation was completed an area of stomach wall about the size of a shilling was exposed to view. Through the centre of this area two silver sutures were passed parallel to one another, and about a quarter of an inch apart. This method of stitching, by which the peritoneum and muscular tissue were left free and in full contact with the wall of the stomach, gave a broad base for adhesions and ensured the formation of a complete sphincter. After the operation the patient complained of thirst, but otherwise he was perfectly comfortable. Two-thirds of a grain of morphia were injected subcutaneously between the time of the operation and midnight. The patient was fed upon nutrient digested enemata and peptonised meat suppositories. Five days later a small galvanic cautery was introduced into the stomach between the two silver loops, which were held apart, so as to make a little tension upon the intervening area of stomach. Then a small gum-elastic catheter (No. 3) was passed into the stomach through the opening thus made, and fixed in position by means of adhesive plaster. He was now fed with milk, four ounces being given every two hours, in addition to the nutriment administered by the rectum. Every day larger tubes were inserted, so that a week later a piece of elastic tubing the size of a No. 17 œsophageal bougie was introduced, and beef-tea, milk, masticated porridge, and corn flour were poured into the stomach through a filler by the patient himself. After the food was so taken the tube was withdrawn, the patient remained in the recumbent posture, and held a small pad of gauze over the opening. Within from fifteen to twenty minutes the wound contracted, so as to prevent the escape of the contents of the stomach. Only a ring of mucous membrane, one-twelfth of an inch broad, is interposed between the opening in the stomach and the cutaneous surface. Within a few days this also disappeared. For the last two days the patient has been out of bed.

In respect to the operation of gastrostomy, it is very important to operate in two stages, the first consisting of exposing and stitching the stomach to the parietes, the second of opening the stomach after firm adhesions have formed, so as to obviate the danger of the contents of that viscus escaping into the peritoneum. With reference to the first stage of the operation, a method a little different from that usually employed was adopted. The sutures did not include the peritoneum or muscular tissue, but, from the stomach wall, they passed through subcutaneous tissue and skin only, and were tied externally. By this arrangement a considerable surface of the stomach was left in contact with the sides of the wound in the parietes; the two serous surfaces were not brought together, and so a broad and firm base for adhesion was secured. At the same time the formation of a complete sphincter was assured, as demonstrated by the cases shown. Regarding the second stage of the operation there is nothing worthy of note. The patients now wear elastic tubes always, and no fluid escapes, but if the tube be removed for a quarter of an hour in any of the cases the fistulæ contract, and prevent the passage of the smallest quantity of the contents of the stomach, and so enable the patients to walk about in comfort. The sphincter action is therefore as good as could be desired. In selecting cases for operation the surgeon is very often hampered by the patient refusing to have anything done until he is so reduced in strength that so serious an operation must be attended with danger. Under favourable circumstances, and with due caution on the part of the operator, gastrostomy, when performed in two stages, should not be attended with much danger; but when the patient has allowed himself to reach the last stage of starvation before he seeks the aid of the surgeon, how can a favourable result be expected? The needles used were ordinary sewing-machine needles, round and with an eye in the point. These were fixed on handles, and by heating in a spirit lamp were bent at an obtuse angle and tempered by dipping in oil. The sutures were silk cord, boiled in carbolised wax. The advantage of using a round needle is that it passes easily through the serous and muscular coats, and, when it reaches the more dense submucous layer, the difference in resistance is easily detected, and the danger of passing the suture into the cavity of the stomach is averted. It has been advocated by some surgeons that a double row of stitches should be inserted, but the disadvantage of unduly increasing the number of sutures employed is that the operation becomes very prolonged, and thereby the danger of death from shock is increased. One row of sutures is quite sufficient to keep the parts in apposition until adhesions form.

When the stomach has been empty for a considerable time, it is found to be situated to the left of the middle line, the pylorus occupying a position close to the left margin of the rectus muscle, while the bulk of the organ is drawn up under the arch of the diaphragm. Consequently, in cases of stricture of the œsophagus, where the patient has been starved, the stomach is not to be looked for in its normal position. Labbé recommends an incision two inches in length extending from the left linea semilunaris outwards, parallel to and half an inch below the costal cartilages. Durham advises a vertical incision to be made three or four inches in length over the upper part of the linea semilunaris, while Sédillot makes a crucial incision through the upper part of the left rectus. Again, Hahn of Berlin recommends the following operation which he has performed

[3] Clinical Reports of the Surgical Hospital of Moscow, 1886.
[4] Archiv für Clin. Chir., Bd. xxxiii., Heft iii., 1886.
[5] British Medical Journal, vol. ii. 1889, p. 930.
[6] Ashhurst's Surgery, vol. vi., p. 40.

in eight cases. An incision is made parallel with the lower edge of the last lower rib and the abdominal cavity opened. A second incision is made in the eighth intercostal space, close to the juncture of the eighth and ninth costal cartilages, through skin and muscular tissues, in a direction obliquely from above downward and outward. The parietal peritoneum at this point is punctured by a pair of curved dressing forceps, or incised; this is enlarged by spreading the forceps. The thumb and index finger of the left hand are introduced into the first-made abdominal wound, and the stomach sought for at a point corresponding as nearly as possible to the fundus. This is grasped by the dressing forceps and drawn through the eighth intercostal space, until the stomach wall overlies the surrounding integument for the space of one centimetre. After covering the wound made first with antiseptic gauze, the stomach, in case the opening is to be made at a subsequent sitting, is sutured by means of its serous covering only to the edges of the wound. In case it is to be opened at once, the serous, muscular, and mucous coats are together attached to the opening in the intercostal space. The abdominal wound is then sutured. After numerous trials upon the cadaver, Hahn found that there was no danger of wounding the diaphragm if care was taken to always select the space between the cartilages of the eighth and ninth ribs, inasmuch as the former has its attachment to the cartilages of the seventh rib towards the median line, acting in such a manner as to leave the eighth intercostal space uncovered and free for operation.

FIG. 1.

Case of cancer of the œsophagus at the level of the lower edge of the cricoid cartilage (Case 3). The illustration shows the gastrostomy wound with the feeding-tube withdrawn, and the complete sphincter action of the muscles of the parietes, by which action no food escaped externally. If the patient lay on his back for a few minutes after taking food he could afterwards walk about with freedom. The gastrostomy was performed on Nov. 6th, 1890, and the patient enjoyed good health till the end of the following July. During the autumn he lost flesh and became very weak; no involvement of lymphatic glands; tumour in œsophagus remained stationary. He was readmitted to the Royal Infirmary on Nov. 5th, 1891, and died on the following day from syncope and congestion of the lungs. Post-mortem examination: No great laryngeal obstruction, no glandular involvement or secondary formations. Microscopic section proved the tumour to be a scirrhous cancer.

FIG. 2.

Case of epithelioma of the œsophagus behind the cricoid cartilage (Case 4). Gastrostomy was performed on Jan. 20th, 1891, and tracheotomy on March 28th, for œdematous laryngitis. The illustration shows feeding and tracheotomy tubes in position. The patient improved during the spring and summer months, but when seen in October the cervical glands were involved and the larynx obstructed. She has not been seen since October.

FIG. 3.

Epithelioma of the lower end of the œsophagus (Case 7). The illustration shows the feeding tube withdrawn. Sphincter action was very complete, so that the tube could not be left out for more than a few minutes. The patient progressed favourably during the early summer, and the disease advanced very slowly; but not receiving proper attention at home, he was found dead in bed from starvation.

The advantages claimed for the operation are as follows:—1. A small and contracted stomach can with greater ease be drawn forward and attached at this point. 2. The attachment seems to be more reliable than when made to the edges of the abdominal wound. The contents of the stomach, on account of the better closure of the opening, do not come into contact with the wound to the same extent as in the older methods. 3. The feeding of the patient can be better accomplished; the closure of the space by the approximation of the ribs acts as a pinch-cock, thus preventing fluids from finding their way out alongside of the feeding tube. 4. No obturator or other means of closing the opening later on is necessary. A gradual dilatation of the fistula, owing to the resistance offered by the cartilages of the ribs, cannot occur.[7]

By the results of the statistics of recent operations the surgeon is certainly encouraged to resort to gastrostomy as soon as the patient is unable to take sufficient food by the mouth, in those cases where it is inadvisable or impossible to feed him by tubes.

A CASE OF SYRINGOMYELUS.

BY J. HUGHLINGS JACKSON, M.D., F.R.S.,
AND
JAMES GALLOWAY, M.A., M.B.

THE patient, Mary H——, aged forty-seven, is a stout, healthy-looking woman. Her grandfather died at an advanced age in the Bethnal-green Infirmary, suffering from a nervous disease which caused contraction of the lower extremities. Her father and mother are alive and in good health. The patient's paternal aunt suffered from rheumatic fever, and her sister died in the London Hospital of heart disease following rheumatic fever. The patient was born in London, but spent part of her childhood in the United States. She has been married twice, and has had ten children. Of these, eight are alive and healthy, and two (twins) died in infancy. No evidence of syphilitic disease nor of alcoholic over-indulgence is obtainable; she has led a careful life, and has enjoyed good health in spite of the nervous affection to be described. Menstruation ceased two years ago.

When twelve years of age, while in St. Louis, U.S., she suffered from a cut on the radial border of the extensor surface of the right forearm, about two inches above the wrist. The tendons were exposed, but the wound seems to have healed after causing very little trouble.

[7] Centralbl. f. Chirg., No. 11, 1890.

Twenty-two years ago, when pregnant, she had an attack which she calls sunstroke, while in the garden on a hot summer afternoon. On this occasion she remained unconscious for two hours and was under medical treatment. After this attack she observed that she was gradually losing sensation in the right arm and hand, and on the right side of the body. She is not quite certain that there was not some loss of sensation in this region even before the attack mentioned. The impairment of sensation increased, and she soon observed that there was loss of power in the forearm and hand, especially affecting the third, fourth, and fifth digits. Having to grasp objects by the right thumb and forefinger she felt awkward at work, and the arm became easily fatigued. Fifteen years ago she received a severe scald on the right forearm, and her attention was especially attracted to the loss of sensation about this time. Since that time she has frequently burnt and otherwise injured her right fingers and arm, being unable to feel that water was too hot for washing in. On a recent occasion she pinned her shawl into the skin of her right breast, and was unaware of the injury inflicted till some time afterwards. Twelve years ago she sustained a laceration of the skin over the right elbow. She thinks she poisoned the wound by removing a piece of skin with a pair of rusty scissors. There resulted considerable inflammation round the elbow, and an abscess, forming in the right axilla, was opened and treated in the ordinary way. For two years and a half at least she has noticed that the third, fourth, and fifth fingers have been contracted and stiff. Eight months ago, while wringing clothes in the awkward manner referred to—grasping by the right forefinger and thumb, resting the elbow on the edge of the tub and using the left hand—she suddenly noticed a cracking sound in the right elbow, and had to stop work on account of pain in moving the joint. The same night the right elbow swelled greatly, and remained large for many months. She says the elbow became "dropsical," and she has been unable to use the joint effectively since that day.

In September, 1891, she was admitted to the London Hospital under the care of Mr. Waren Tay. The condition of the right elbow exactly resembled that observed in Charcot's joint disease, but no signs of tabes dorsalis were discovered. The arm was placed on a splint, the fluid became absorbed, and the elbow diminished in size. The joint, in spite of the great changes observed, was uncomfortable rather than painful. On leaving the surgical wards she was transferred to the care of Dr. Hughlings Jackson. The following conditions may now be observed: The right elbow and forearm are considerably larger than the left. The right elbow-joint is quite disorganised, and there is some, though not excessive, osteophytic growth in the neighbourhood of the joint. The forearm can be moved laterally at the joint for about a quarter of an inch with much grating. Movements at the elbow cause a little discomfort, but little or no pain; complete extension is impossible on account of the altered relations of the joint surfaces; the other movements are abnormally free, and are attended with grating in the joint. The right wrist has also been somewhat swollen, and slight grating can be obtained on movement. The third, fourth, and fifth digits of the right hand are permanently flexed and contracted, the second and first digits show similar changes, but not to the same extent. Wasting of the thenar, hypothenar, and interossei muscles is well marked. (Fig. 1.)

The following results of the reactions of the affected muscles to electricity are communicated by Dr. James Taylor: "All the muscles of the affected side, including the facial muscles, react to the interrupted current, but the current required to produce the reaction is greater than that required for the muscles of the (left) unaffected side. This difference in reaction is most marked in the small muscles of the hand. To the continuous current, similarly, a greater current is required to produce a reaction, but there is no qualitative change. K.C.C. is always greater than A.C.C." Over an area, including the front and back of the right upper extremity, the right side of the scalp, face, and neck, and the right side of the trunk to about the level of the tenth dorsal vertebra there exists marked alteration in sensation. The patient cannot distinguish between painful sensations and contact. Thus she cannot tell the difference when the skin is touched with the finger or the sharp points of a pair of compasses. The locality is readily distinguished, but both tests appear as if "a weight" had been placed on the part. Over this region, also, the patient cannot distinguish between heat and cold. She feels and localises the point of contact when hot and cold objects are applied, but cannot tell which is the hot or which the cold object. The muscular sense in the arm is retained. At the level of the tenth dorsal vertebra on the right side there is a region about one inch in breadth where the markedly altered sensations shade rapidly into normal sensation. In the middle line the limit of altered sensation is well marked. The sensation of the mucous membrane of the right side of the tongue, mouth, palate, and fauces is affected in a fashion similar to that of the body. A touch can be readily localised, but a painful sensation is felt only as a touch.[1] The sense of smell seems to be less acute on using the right than when using the left nostril, and there seems to be slight diminution of taste on the right side of the tongue, but the results obtained on examining these special senses are not very trustworthy. The senses of sight and hearing

FIG. 1.

Engraving to show the position assumed by the right hand. From photograph. (Mary H——.)

are normal. There is no alteration in the movement of the eye, and the fundus oculi is normal. The lower extremities are normal in all respects, and beyond a slight systolic murmur at the base of the heart no other morbid phenomena are noticeable. (Figs. 2 and 3.)

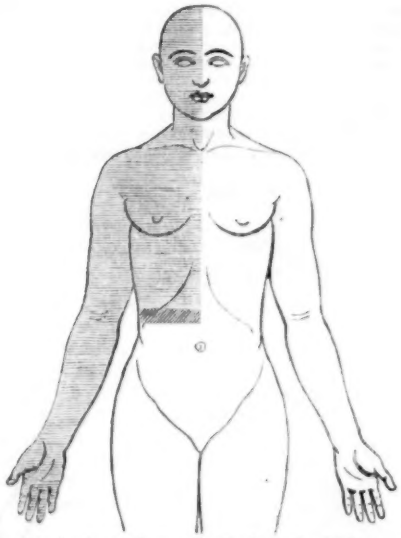
The lesion characteristic of syringomyelus appears to be of congenital origin, and consists essentially of a mass of neuroglia situated in the deeper parts of the posterior fissure of the spinal cord, behind the central canal. The quantity of the abnormal tissue varies greatly in amount in different cases, and at different levels in the same case. This variation is due probably to two causes—to the amount which persists originally after development ceases, and to the increase which this original quantity subsequently undergoes. The cavity from which the disease is named is probably in the first instance nothing more than the early posterior extension of the central canal of the cord, which has failed to become filled up. At the same time, the existence of the embryonic neuroglia in this position probably interferes with the proper development of the posterior columns of the cord. The case now recorded emphasises the fact that the condition mentioned may exist for long in the cord, simply as a deformity, without causing evident symptoms. As has been noted, the patient refers to a period at least twenty-two years ago as the date of commencement of her present symptoms. During the twenty-five years of her life preceding that period she had suffered from no sign of the disease. In a case recently described by one of us (Dr. J. Galloway), typical lesions of the disease were found in a patient aged forty-three, who had been in robust health till two years before death, which occurred from the exhaustion following acute mania, and only a few weeks before

[1] To this striking "abolition of sensibility to pain and to temperature, with preservation of sensibility to contact and to the muscular sense," Professor Charcot proposes to apply the term "dissociation syringomyélique." Bruhl: Contribution à l'Etude de la Syringomyélie. Paris, 1889, p. 14.

death were any symptoms noted pointing to a lesion of the spinal cord.[2] (Figs. 4 and 5.)

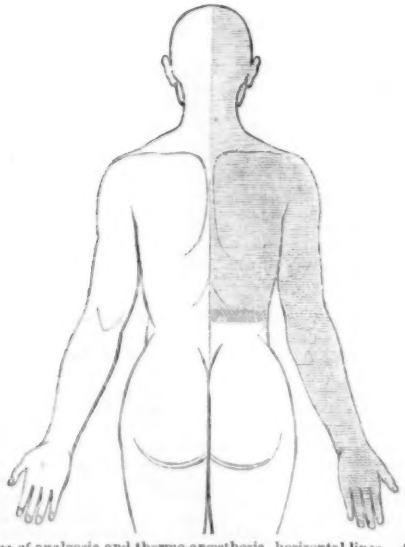
It is important to observe that the early signs, before marked degenerative changes in the cord supervene, consist of the loss of sensation to pain and of the power of dis-

FIG. 2.



Area of analgesia and thermo-anæsthesia, horizontal lines. Area of transition, oblique lines. (Mary H——.)

FIG. 3



Area of analgesia and thermo-anæsthesia, horizontal lines. Area of transition, oblique lines. (Mary H——.)

tinguishing between heat and cold, while the ordinary contact sensation remains practically intact. This is of interest, as so far as is known at present the conducting tracts for painful sensations, at all events, exist in the lateral columns, while the degenerative changes which result from the increased growth or necrosis of the neuroglia mass are shown most prominently in the posterior columns and in the grey substance of the cord. (Fig. 6.) The alteration in sensation in this case involves the head and neck, the area of distribution of the cutaneous branches of the upper cervical nerves, and of the fifth cranial nerve. This phenomenon is a somewhat rare symptom of the disease, but it is well known that the lesion may continue upwards through the cervical cord, under and involving the floor of the fourth ventricle, and even into the third

FIG. 4.

Section through cervical spinal cord, showing the usual disposition of the neuroglia mass, its relations to the posterior columns of the cord &c., the cavity from which the disease is named. The grey horns are undisturbed. (From the case quoted in the text. Trans. Path. Soc.)

FIG. 5.

Section through the dorsal region of the spinal cord. A small quantity of the abnormal neuroglia is seen surrounding a cavity in the usual position. There is great destruction of the grey matter of the cord. (From the case quoted in the text. Trans. Path. Soc.)

ventricle, associated with dilatation of the lateral ventricles of the brain. A case very similar to the present is recorded by Dr. Bruhl in his recent work on this subject. In the case referred to the diagrams of altered sensation are almost identical with those appended to the case now described.[3] The case of our patient affords also an example of an acute arthritic degeneration occurring during the course of syringomyelus; the condition of the joint is now exactly similar to the well-known arthropathy so often met with in tabes dorsalis. Although

FIG. 6.

Section through the cervical spinal cord. Almost complete destruction of the central regions of the cord may be observed. (From Dr. Turner's case. Trans. Path. Soc., vol. xxxix.)

the patient had an axillary abscess it was probably of infective origin, and had nothing in common with the painless collections of pus especially occurring on the fingers described by Morvan, and now considered to be associated with certain forms of syringomyelus. It is interesting to note also in this connexion that in spite of the fact that the patient has frequently received injury on the right arm, no abscess or "whitlow" has occurred except in the single instance above referred to. The question of the identity of certain forms of syringomyelus and anæs-

[2] Trans. Path. Soc. Lond., 1890-91

[3] Bruhl, loc. cit., pp. 138-143.

thetic leprosy has recently received attention in France.[4] In this particular case the absence of trophic disturbances characteristic of the form of syringomyelus described by Morvan, as well as the fact of the anæsthesia existing in such a well-marked area without any tendency to a macular arrangement, preclude the suggestion of the diagnosis of leprosy in this case, and emphasise the fact that syringomyelus is a much wider disease than the forms of it distinguished by trophic changes, and in this wider category we believe the case under consideration has a place. It may be of interest to mention that a patient presenting many symptoms of syringomyelus was shown at a recent meeting of the Neurological Society by Dr. Ferrier. Of this important case we learn that Dr. Ferrier's diagnosis has been verified by necropsy since he exhibited the patient. A very complete bibliography of the cases reported both in English and foreign literature will be found in the works already quoted by Bruhl and Verchère.

REMARKS ON THE OPERATION OF EXCISION OF THE BREAST AND ITS AFTER-TREATMENT.

BY A. PEARCE GOULD, M.S.,
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IT may be thought that some apology is due for offering to the profession any remarks upon a subject so trite as the operation of excision of the breast. But surgeons recognise the importance of paying attention to small details, and I venture, therefore, to refer to points in the conduct and after-treatment of this operation, attention to which has in my hands been followed by greater comfort and more speedy recovery of the patients. I will not occupy the valuable space of this journal by a new description of the old operation of excision of the mamma, but will at once deal with certain special points.

1. *The Incision.*—Some difference of opinion exists as to the best direction for the elliptical incision which is almost invariably employed. In a clinical lecture published in THE LANCET of May 9th, 1891, Mr. Christopher Heath discusses this matter from the point of view of the more or less perfect drainage of the wound which can be obtained. Another point considered to be of importance is the ease with which the incision can be prolonged into the axilla for the removal of infected glands. I would submit that neither of these considerations need have any weight with the surgeon. There is no wound which is more easily and uniformly treated without resort to any means of drainage than that left after removal of the breast and axillary glands. It is sometimes convenient to prolong the incision into the axilla, but it is never necessary to do so, for it is quite easy to clear out the axilla completely through the wound made for removal of the mamma. Quite recently, I have had to operate upon two cases of scirrhous tumour situated in the upper portion of the mammary gland, and I made my incisions so that the long axis of the ellipse of skin removed was vertical. In both cases it was quite easy to remove the whole of the axillary fat and glands through this incision. This is the most extreme case. Two considerations only should guide the surgeon in planning his incisions — one paramount, the other of secondary importance. The first is the complete removal of the nipple and the skin over the tumour when that is malignant; the second is to have the cicatrix parallel to the fibres of the pectoralis major. In most cases these two objects are best attained by the same incision—one enclosing an ellipse of skin parallel with the anterior fold of the axilla when the arm is at a right angle with the trunk.

2. *The Axillary Glands.*—When the mamma is not the seat of a malignant growth, of course the surgeon will not invade the axilla, and even when the disease is sarcoma, the axillary glands should not be removed unless obviously diseased. During the last year I operated upon two patients with sarcoma of the breast, in whom secondary growths occurred in the axillary glands. But in cases of carcinoma of the mamma I am strongly of opinion that it is the surgeon's duty, as a matter of routine, to remove all the axillary glands in their packing of fat. When I first made this assertion, in a paper read before the Medical Society of London, March 27th, 1882,[1] I was mainly influenced by theoretical considerations. Since then I have had, and seen, several cases where disease could only be recognised in the axillary glands after their removal, because it existed in foci of the size of a white mustard-seed or peppercorn. I have followed this practice in every case of operation for cancer of the breast since 1880, and have never had cause to regret it. Where the glands are obviously diseased all surgeons are agreed that they should be removed, and difference of opinion only arises in the cases where no enlargement of the glands can be detected. It is assumed that in such cases no glandular disease exists, and it is asserted that the removal of the glands is an unnecessary extension of the operation and an additional danger. But the assumption is not well founded; for it is only when careful examination of the glands after removal has shown them to be free from cancerous infiltration that we can be sure that they are not infected, and then it must be remembered that it is just in these cases that the axillary glands can be removed with practically perfect safety. There is no adhesion to vessels, muscles, or bone to render the operation hazardous. It is useless to refer to statistics in this matter. The cases where in the past the glands have been excised as well as the mamma, of course, show a rather longer convalescence, and even a higher mortality than those where only the breast has been excised, for they include all the severer cases, such as those requiring extensive dissection, and those where the glands are adherent to the axillary vessels or their large branches. But where the glands are not obviously diseased there is no risk of wounding any important vessel or nerve, and their free removal in no way adds to the danger of the operation if the wound is aseptic. It is best to remove the axillary glands and fat in one mass, first separating it from the pectoral muscles, then from the serratus magnus, then from the subscapularis, and lastly from the vessels on the outer side. The fat should be removed quite up to the clavicle, as the chain of glands extends up to that bone. A raspatory is the best instrument to use when anything more than the finger is needed. The intercosto-humeral nerve should be preserved, and this can easily be done in all cases where the glandular infiltration is limited.

3. *Arrest of Hæmorrhage.*—The most convenient plan is to pick up with pressure forceps any spurting arteries as they are cut, and then, when the breast is detached from the pectoral muscle, to carefully search for any smaller bleeding points and treat them in the same way. Then proceed with the clearance of the axilla, and if any artery is divided, seize it also with forceps. Now remove the forceps in the order in which they were put on, taking great care not to open up the compressed ends of the arteries. Occasionally one or more arteries will require to be twisted—a ligature is never necessary. Sponges should be used only to dry the wound, and should never be rubbed over it; the less they are used the better. No bleeding point, however small, should be neglected.

4. *Irrigation.*—The wound should be thoroughly flushed with a solution of bichloride of mercury (1 in 2000), after the hæmorrhage has been arrested. I generally use four or five quarts of the solution, and find it a good plan to flush the wound with it just before fastening the last suture. Care must be taken to express all the fluid, and if this is done there is no fear of corrosive sublimate poisoning. Besides its action as an antiseptic, this solution is a valuable astringent, and greatly diminishes the subsequent serous exudation, and in this respect is far superior to carbolic acid solution.

5. *Suture and Drainage.*—I have obtained the best results with a continuous suture of the finest chromicised catgut introduced at intervals of half an inch, and each loop caught up—the button-hole stitch. A drainage-tube should not be employed.

6. *The Dressing.*—The dressing should fulfil two conditions. It ought to be aseptic, and it should secure exact apposition of the wound surfaces without any movement, until primary adhesion has taken place. The rounded, firm, and yet elastic chest wall is admirably adapted for a surface of

[4] F. Verchère. A review in the Revue des Sciences Médicales, vol. xxxviii., p. 324. See also a translation of the above in "Brain," 1891, p. 368, by Dr. Cagney.

[1] See THE LANCET, vol. i. 1882.

counter-pressure. Immediately over the wound I place a fourfold dressing of boric lint, large enough to extend about an inch in all directions beyond the wound surface. This is fixed in place by strips of strapping, cut two inches wide. They are fixed to the back at the level of the spine of the scapula, passed round the chest to the opposite shoulder, and put on from the lower edge of the dressing up to the anterior fold of the axilla. They are applied sufficiently firmly to keep the flaps of skin well and evenly pressed against the thorax, and so prevent any bagging in the wound. Over this a dressing of alembroth gauze or wool is fastened on with a roller bandage carried round the trunk in an ascending figure-of 8. Lastly, the arm is fixed to the side, with the forearm lying across the trunk, the elbow bent at a right angle. This should be done by means of a sling, not by bandages. The best sling for the purpose is a

A, Strapping. B, Figure-of-8 bandage over outer dressing. C, Sling, showing its two folds. ×, Pins fastening the sling to the bandage.

common chamber-towel folded in two lengthwise. The forearm and arm are dropped between its two layers, the hand being just within one end, and then the other end is passed round the back under the opposite arm, and the two ends are pinned together and to the underlying bandage. Additional pins should be placed behind the arm and above the forearm. In this way the arm and forearm are securely, evenly, and comfortably fixed, and by removing two or three of the pins the outer layer of the sling can be turned down, and the hand and forearm washed every day, without in the least disturbing the position of the arm and the rest of the dressing. One special feature of this dressing is that there is no bandage or sling over the shoulder or round the neck—a most important matter for the patient's comfort, as the head and neck can be moved quite freely. A bandage passed round or over the neck is more than uncomfortable—it is inefficient, for it is sure to get loose.

The *after-treatment* can be dismissed in a few words. The first trouble to combat is the pain in the back, which inevitably comes on when a patient lies in bed with the arm fixed to the side. For the first twenty-four hours a firm pillow should be carefully placed under the arm of the affected side so as to support it well; this may be entirely successful in relieving the pain. After the first day I like the patient to be raised into a sitting posture, well supported by pillows or a bed-rest; this at once relieves the pain. On the second and each successive day the sling should be gently turned back; and while one hand is placed upon the arm to keep it fixed against the chest, the fingers, wrist, and elbow should be flexed and extended, then washed, dried, powdered, and again fixed in the sling. This is a great refreshment to the patient, and in no way disturbs the wound or the dressings over it. On the fourth or fifth day, if all is well, the patient may get up and sit on a chair. On the seventh day the dressing should be removed, care being taken in turning back the deepest part of it not to break down the union of the wound edges and surfaces. As a rule union will be found complete if the edges have been brought into exact apposition without undue tension, and if the dressing has been affixed with the requisite amount of pressure. All the stitches should be cut and gently removed, and the tender cicatrix should be protected by a dressing of a double layer of sublimate gauze fixed on with collodion, and over that a light boric lint dressing may be fastened by a figure-of 8 bandage round the body. The patient, if in a hospital, may now go home and return in a week for the removal of this dressing, when, if the cicatrix is firm, no further treatment will be needed. It is not necessary or wise to keep the arm fixed to the side after the first week; there will not then be any troublesome stiffness of the shoulder afterwards. In his recently published "Manual of Operative Surgery" Mr. Treves states that "the patient may usually be ordered up on the eleventh day, and may leave the hospital on the fourteenth." As stated above, I have found it not only possible, but desirable, to allow my patients up much earlier than this, and lately they have, as a rule, left the hospital before the tenth day, some of them on the eighth day.

I append very brief notes of the cases of excision of the mamma under my care in the Middlesex Hospital last year up to the time of my leaving for my annual holiday. These cases were treated in the manner described above. In all except Cases 1 and 2 the axillary glands and fat were removed.

CASE 1.—Alf. D——, aged forty-nine. Cystic tumour of breast; operation on Jan. 23rd; got up on Jan. 27th.—Jan. 31st (ninth day): Dressings and sutures removed; wound healed except at two small points, where edges had not been brought into perfect apposition. Went home same day.

CASE 2.—Emma S——, aged forty-two. Multiple involution cysts of both breasts; right breast removed on March 28th.—April 4th: Dressings and sutures removed; wound entirely healed.—6th (tenth day): Left hospital. This patient returned ten days later.—17th: Left breast excised.—23rd: Dressed; sutures removed; wound entirely healed. She stayed in hospital until May 4th on account of rheumatic pains in the shoulder.

CASE 3.—Emma Y——, aged sixty-three. Scirrhus of right breast and axillary glands; operation on May 7th.—15th: Dressed; sutures removed; wound entirely healed.—18th: Left the hospital.

CASE 4.—Frederick H——, aged forty-one. Scirrhus of right breast and axillary glands; operation on May 9th.—16th: Dressed; sutures removed; wound healed, except two small spots where edges had not been brought into exact apposition.—17th: Went home (ninth day).

CASE 5.—Annie B——, aged sixty-two. Scirrhus of left breast and axillary glands; operation on June 27th.—July 3rd: Got up.—4th: Dressed; sutures removed; wound entirely healed. The patient left the hospital on July 6th.

CASE 6.—Mary W——, aged fifty-three. Sarcoma of right breast and axillary glands; operation on July 15th.—July 20th (sixth day): Dressings and sutures removed; wound entirely healed.—21st (seventh day): Went home.

CASE 7.—Emily B——, aged forty-two. Scirrhus of left breast and axillary glands; operation on July 20th.—25th: Got up.—26th: Dressed; sutures removed; wound entirely healed.—27th (eighth day): Went home.

Queen Anne-street, W.

SUBPERITONEAL HYSTERECTOMY.[1]

BY HEYWOOD SMITH, M.A., M.D. OXON.

IN giving the above title to this paper I have not aimed at its being accurately descriptive. A more proper title would be "An Intra-pelvic yet Extra-peritoneal Treatment of the Stump in Cases of Hysterectomy." I propose briefly to sketch the methods most commonly in use for the treatment of the cervical stump, quoting from the papers and speeches of various operators, to quote some cases of intra-pelvic treatment of the stump by those who have so operated, then to narrate those cases in my own practice, and finally to make some observations which I hope will tend to show the intra-pelvic and extra-peritoneal method will eventually become *the* method of treatment, where practicable, in cases of fibrous tumour of the uterus. In dealing with the stump in supra-vaginal hysterectomy we are brought to face a totally different condition than we have in the pedicle of an ovarian tumour, for we have to manipulate a stump composed of contractile tissue, which by its shrinkage, when constricted as a whole, relaxes the pressure on the vessels and opens up the danger of fatal hæmorrhage. To obviate this danger the majority of operators prefer to bring the stump outside the abdominal wound, where it is open to observation and can be further constricted from time to time as necessity requires. If, however, we can carry out a method whereby the vessels can be effectually secured, and at the same time do away with the disadvantages of the clamp, we shall, I venture to think, see our cases get well more rapidly and our patients less exposed both to danger from septic absorption as well as to inconvenience from tension on the stump and the abdominal wound and from the inevitable crowding of the bladder.

A case was reported by Dr. Christian Fenger to the Gynæcological Society of Chicago in 1888, which, though a pedunculated fibro-cystoma, yet involved the suturing of uterine contractile tissue. This case recovered after some suppuration in the stump. Dr. Bantock exhibited a tumour before this Society in 1888, where, after its removal, an enormous surface was left. After tying many bleeding points he stitched the anterior half of the peritoneum to the posterior, completely obliterating the raw surface. He also, in 1889, brought before the Society a case of fibroid of the uterus removed by Dr. Vincent Jackson of Wolverhampton. In this case peritoneal flaps were stitched over the cut surface. In vol. v. of the *British Gynæcological Journal* Dr. Rakuza of Odessa reports five cases of supra-vaginal amputation of the uterus with three recoveries, and two deaths from peritonitis. In 1890 Mr. Reeves brought forward a case where, after tying the broad ligaments, he tied each uterine artery separately, and treated the stump after the intra-peritoneal method. In the *Medical Press* of Nov. 25th and Dec. 9th, 1891, Mr. Reeves has published a paper on Hysterectomy in which he advocates this method of operating, giving two cases. He quotes a Dutch operator who had had forty-four cases with four or five deaths, and Dr. Chrotak of Vienna, who had done ten cases, all successful. At a meeting of the Gynæcological Society of Chicago, January, 1890, Dr. Henry Byford introduced a new method, that of vaginal fixation of the stump, where the end of the stump is brought into the vagina through an opening made in the anterior fornix. At a meeting of the American Gynæcological Society, Dr. Skene suggested "dilatation and inversion of the cervix," which would fulfil the indications without wounding the vagina. In the *American Journal of Obstetrics* for April, 1890, there appeared a paper by Dr. James Goffe of New York on "A New Method — the Intra-abdominal but Extra-peritoneal Method of disposing of the Pedicle in Supra-vaginal Hysterectomy for Fibroid Tumour, with Report of Four Successful Cases." His method of operating was shortly as follows: Anterior and posterior flaps were stripped off the uterus, the stump transfixed and tied inside the flaps, and the whole stitched over with catgut. Dr. Goffe says: "In regard to the operation itself, while each of the different features has been used by different operators, I know of no one having combined them all into a systematic method till I did so myself. The advantages are that it has all the elements of safety that any of the operations in use have, and, I believe, more; moreover, it leaves no ligature in the pelvis to give trouble, and, above all, it restores the organs to their proper relation in the pelvis." Mr. Meredith, in his paper read before the Medical Society in 1890, indicates the possibility of securing the uterine stump intra-abdominally. In the discussion that followed Mr. Treves said: "The bloodvessels going to the mass were easy to find and to ligature. Having secured these, the ligaments on each side were divided and a V-shaped section of the cervix was made, leaving a kind of flap on each side. When the tumour was removed in this manner a large gash was made in the peritoneum, and after this was stitched up there remained a closed seam running across the pelvis." Mr. Lawson Tait, after criticising this method of operating, went on to say: "We all know perfectly well that if we could secure the vessels in our stumps effectually, and then drop the stump back in the abdomen, we should have at once, in all probability, a 5 or 6 per cent. mortality for these dreadful operations." Dr. Elder of Nottingham said "he was quite at one with Mr. Treves in regarding the clamp as the relic of a barbarous age, and thought the day was not far distant when it would be relegated to the limbo of antiquity and its use superseded by an intra-peritoneal method more in accordance with the advanced surgery of to-day." In THE LANCET of Nov. 29th, 1890, there appeared a paper on "Supra-vaginal (Abdominal) Hysterectomy with the Scissors, a Contribution to the Discussion on the Treatment of the Uterine Stump," by H. N. M. Milton of Cairo. He shows that the blood-supply can be efficiently controlled, even when the vessels are large, by ligaturing them separately. He then describes the formation of the anterior and posterior flaps, showing that by separating the peritoneum from the sides of the cervix at the points of union of the incisions all fear of injuring the ureters may be avoided. He then narrates three cases in which he thus operated with success. In THE LANCET of Sept. 26th, 1891, he writes that he has been successful in a fourth case. Dr. Widenham Maunsell of Otago, New Zealand, described in 1887 an intra-peritoneal operation where he sewed the peritoneal flaps over the stump, but he also closed the cervical canal by vivifying its sides, a method which I venture to think unadvisable, as closing the natural exit to any pus that might be formed. Dr. Sinclair, in a letter to the *British Medical Journal* of Nov. 14th, 1891, describes the intra-pelvic operation, "finishing the stump like a plastic operation." His cases, ten or twelve, all recovered.

I will now briefly relate my own experience.

CASE 1.—S. T. W——, aged thirty-five; married nineteen years, never pregnant; admitted into Warrington Lodge, Aug. 28th, 1890. Tumour first felt two years ago; grown rapidly; constant pain; first flooding one year ago. Operation, cælio-hysterectomy. Long incision, tumour drawn out of abdomen, elastic ligature placed round its base, uterine wall cut round about one third up, and tumour shelled out of its bed in the cervix; uterine arteries tied separately; stump mopped over with hot carbolised oil. The peritoneum was sewn over the stump with an uninterrupted suture of China twist with Lembert's stitches. Operation lasted eighty minutes; tumour weighed six pounds. Temperature rose on second day. On the sixteenth day after the operation, as the temperature indicated pus, I passed a sound carefully up the cervical canal and evacuated a quantity of thick offensive pus. (I had not at that time seen Dr. Goffe's paper where he had the same experience.) Patient discharged well thirty-six days after operation.

CASE 2.—J. H——, aged thirty-five; married ten years; no children; admitted Feb. 24th, 1891; ailing seven years. Tumour felt two years and a half ago. Operation, cælio-hysterectomy, Feb. 27th. Long incision; two large tumours continuous with one another drawn out of pelvis; broad ligaments clamped on each side with long pressure forceps and divided; elastic tube passed round the base of the tumour, which was then cut away; cut surface large, contracted rapidly; profuse hæmorrhage; uterine arteries ligatured with chromicised catgut; whole length of raw surface from the end of one broad ligament to the other laced with an uninterrupted chromicised catgut suture, the stitches over the stump being Lembert's. On the fifth day the temperature rose, and on the eighth day it was 103·4°. There was a large swelling on the right of the pelvis; by

[1] Abstract of a paper read before the British Gynæcological Society on Feb. 11th, 1892.

aspiration it proved to be a hæmatocele; free incision and some offensive, broken-down blood-clot evacuated. This had to be done more than once, but the patient eventually did well. The occurrence of this hæmatocele, which was large, affords a good proof that if the peritoneum is well sutured it heals quickly and so firmly as to withstand the pressure of fluid (blood or pus) upwards without giving way.

CASE 3.—A. H——, aged forty-six years and nine months; married twenty years and nine months; one child aged twenty. Had been under the care of a specialist at one of the large general hospitals, who said he could do nothing for her. Admitted May 27th, 1891. Uterus jammed up on the right anterior aspect of the pelvis by a large hard tumour. Operation on June 3rd. A long incision below the umbilicus was made, the front of the tumour covered with the left broad ligament; this was tied and divided. The tumour, which is unusual in fibroids, was extensively adherent to the bottom of the pelvis. It was separated and drawn out of the abdomen, an elastic ligature was passed round the cervix and the tumour peeled off the uterus, which was considerably torn; the peritoneal flaps were then made, the cervix transfixed and tied inside the flaps, and the uterus cut away. The pelvic peritoneal wound was closed as in Case 2. A sponge wrung out of tincture of matico was temporarily packed into the pelvis. A glass drainage-tube was inserted, which was removed on the third day. The operation lasted ninety-five minutes. Indications of suppuration supervened, the os uteri was dilated, and the silk ligature that was round the cervix and the catgut ligature of the uterine artery came away. In this case the closed peritoneum over the uterine stump held and resisted the suppuration of the cervical tissue going on just below it.

I will now briefly sum up the lessons to be learnt from the cases: (1) That, where it is possible of application, the subperitoneal method holds out as good a prospect of success as any other, and leaves the other pelvic organs free and unfettered by any constriction or adhesion; (2) the best methods, it appears to me, are those of Dr. Goffe and Mr. Milton, and so far carried out in a modified way by myself. The main points in the operation seem to be: (1) Make the peritoneal flaps sufficiently large, as they can be reduced, but not added to; (2) secure absolutely every bleeding branch of the uterine arteries, if possible, separately; (3) lace the whole pelvic peritoneal wound across with an uninterrupted suture of chromicised catgut, taking care that Lembert's stitches are used over the uterine stump, so that it is entirely sealed with peritoneal covering.

It is recommended that the cervical stump be divided as low down as possible, for the proportion of connective tissue to contractile tissue is greater than in the upper part of the uterus. There will therefore be less shrinking the more the amputation is carried through the cervix proper. I would also point out the great advantage of using tincture of matico as a styptic where there is any oozing. It is very effectual, and seems to do much less harm than others. There remain three points for discussion: 1. Shall we use a drainage-tube? Where there is any oozing, Yes; but where the pelvis, after the lacing, remains dry, No. 2. Shall the cervical canal be destroyed by caustics? Shall it be transfixed and tied, or shall it be left free? If the bloodvessels are quite secured, No, as such ligature tends to set up suppuration within the cervical canal, and if the canal is obliterated the natural exit of any pus that may form is cut off; better leave it free. I here close, and trust that this paper may be the means of calling attention to a method of performing the operation of hysterectomy that, when we have mastered its details, will prove more scientific than the abdominal fixation of the stump, will leave the parts with their relations unaltered, and pain from unnatural tension impossible, and that will give results, as shown in the numerous cases that have recovered among those related in this paper, that, considering the greater gravity of the operation, will compare not unfavourably with those we have arrived at in ovariotomy.

Harley-street, W.

THE New York Health Department officers have, it is stated, found thirty-seven victims of typhus fever among the 267 Hebrew passengers of the steamship *Massalia*, of the Fabre line, from Naples, which landed 717 emigrants on Jan. 30th.

THE

TREATMENT OF INOPERABLE MALIGNANT NEOPLASMS BY THE ANILINE DYES.[1]

BY PROF. DR R. VON MOSETIG-MOORHOF OF VIENNA.

TRANSLATED AND MUCH CONDENSED BY F. F. BURGHARD, M.S. LOND., F.R.C.S. ENG., ASSISTANT SURGEON TO KING'S COLLEGE HOSPITAL.

PROF. MOSETIG-MOORHOF thinks it desirable, in consequence of the numerous inquiries made of him and the appeals for the publication of cases, to put on record the results that he has obtained up to the present time in the treatment of malignant growths too advanced for operative relief by the injection of the aniline dyes. In 1883 he injected a 1 per cent. watery solution of aniline trichlorate (free of all traces of arsenic) into a man fifty years of age, who was the subject of a sarcoma of the inguinal region as large as an orange. The injection was repeated every two or three days well into the tumour. In two months' time the mass had decreased to a nodule the size of a nut; it had in part broken down and in part shrivelled up. The man remained well for a year, and then died of an acute pneumonia without any relapse having taken place. Notwithstanding this very successful case the treatment had to be abandoned for a time, owing partly to the unpleasant constitutional effects that were produced and partly to want of material. In 1890 Professor Stilling's pyoktanin (Merck's preparation) was tried, and owing to the fact that it combines a certain amount of antiseptic power with a high degree of innocuousness it has been largely used since. The technique of the treatment is then given at some length. A special syringe, holding from two to three grammes, is used with long and wide cannulæ. A Pravaz syringe does not hold sufficient, and with a small needle greater pressure has to be exerted on the piston. Some special curved cannulæ are used for injections into the tongue. The needle must be most carefully rendered aseptic, and the syringe should be used for no other purpose. An aqueous solution should be used, and should be carefully filtered (if possible, through an aseptic asbestos filter), as it has always a tendency to precipitate, and so block the cannula. To avoid this, also, it is advisable not to use a more concentrated solution than 1 in 500. Disinfect the skin. The cannula should be plunged into healthy skin immediately beyond the tumour, and pushed in deeply towards the edge of the growth. When it has penetrated the latter, the solution should be slowly injected. As much as from two to twelve grammes of the 1 in 500 solution may be injected at each sitting, the injections being made either at one spot or at several, as may seem necessary. Where the surface of the growth is ulcerated, the needle must be introduced further away and pushed deeper, as there is always an escape of the fluid from the surface of the ulcer. In tongue cancer it is important not to inject through the floor of the ulcer. Such a proceeding may be followed by cellulitis from the introduction of septic matter from the floor of the ulcer along the track of the needle. In cases of enlarged submental glands or epithelioma of the floor of the mouth the injections should be made from the out side.[2]

The objections brought forward against the treatment are then dealt with. Prof. Mosetig-Moorhof affirms that in his experience, and after many hundreds of injections, there is no danger of any coagulation occurring if the drug is injected by accident directly into the blood stream. This clinical experience is supported by Ehrlich's experiments, where it was found that the methylene blue when injected into the bloodvessels of dogs caused no coagulation and no ill effects. This point was further exemplified in a case of very large pulsating soft sarcoma of bone in a child where a profuse rush of blood occurred through the cannula, and where pressure had to be applied after the injection had been made in order to check the bleeding. Here the drug

[1] Wiener Klinik, January, 1892.

[2] Details of cases where the drug was used in malignant disease of various viscera in a somewhat tentative manner, and with no great results, are here omitted, as they do not greatly enhance the value of the paper.

must have got into the blood stream. Nevertheless the pain disappeared and the boy felt better.

It has been found that the harder varieties of sarcoma and the carcinomata, especially the former, are likely to derive more benefit from this injection treatment than are the softer, more vascular, and rapidly growing sarcomata. The tumours of the soft parts are likewise more amenable to the treatment than are those of bone. Inflammation never occurs, unless septic material has been introduced with the cannula. Hence the precautions to render the instruments aseptic, and to avoid injecting through ulcerated surfaces. Some œdema may occur soon after injection, and persist for some days. This is probably due to the pressure of the fluid and its slow absorption from the site of injection. Pain is rarely felt for more than a few minutes. It is due to the distension of the parts by the large amount of fluid injected. In some cases it may last an hour or two. In only two cases, where twelve grammes had been injected at one spot, there were some shiverings and a slight rise of temperature.

The benefits are thus enumerated:—1. Relief of pain, usually very marked and often very rapid. This is explained by Ehrlich's observation that in the living subject these dyes are found first of all to affect the nerve endings. This relief of pain after a few injections may be permanent. There is, however, no relief of the distressing pain in case of "carcinome en cuirasse." 2. Improvement of general health. The relief of pain leads to natural sleep, improved appetite, and gain in weight. 3. Mental improvement. It cheers and lightens a patient's end by exciting hopes and rousing him from hopeless despondency. 4. Improvement in function of various organs—e.g., the tongue may become movable in epithelioma linguæ &c. 5. Shrinking of the tumour. Even in the softest and most rapidly growing tumours some retardation of the growth may be produced and perhaps some diminution in bulk. In suitable cases this may be very marked, and may either occur from breaking down of the growth or shrinking up of it. The two processes are usually combined. Secondarily affected glands may shrink as a result of injections into the primary growth. 6. Cicatrisation of a malignant ulcer may occur, especially when the drug is directly applied to the surface. 7. A foul ulcerated surface will clean and fœtor will diminish. It is therefore found in actual practice that shrinking of the growth, and even actual cicatrisation, may be obtained. Sufficient time has not yet elapsed to enable any opinion to be formed as to relapses. Only two out of more than seventy cases treated by Professor Mosetig-Moorhof have up to the present time (one year from the beginning of the treatment) relapsed. The treatment should only, of course, be used in cases that are beyond the reach of operation. It cannot do harm, and may do much good. As an example of the good results to be obtained, there is appended a table of ten cases out of seventy or more treated by Professor Mosetig-Moorhof.

TEN CASES OF MALIGNANT NEOPLASMS TREATED BY ANILINE DYES.

No.	Age and sex.	Nature of tumour.	Duration of disease.	Duration of treatment.	Number of injections.	Amount of methyl violet solution.	Result.
1	Female, aged 66	Myeloid of lower jaw	1 year	7 months	84	230 grammes	Tumour disappeared, leaving shell of bone. No return in 8 months.
2	Male, aged 65	Subperitoneal pelvic sarcoma	1½ ,,	6 ,,	22	66 ,,	Reduced to one-third its original size. Stationary 8 months.
3	Female, aged 32	Supramammary sarcoma	4 years	3 ,,	67	201 ,,	Reduced to half its size. Treatment interrupted by pregnancy.
4	Male, aged 45	Sarcoma of neck	3 ,,	6 ,,	73	219 ,,	About one-fifth of size. Lost pain. Cicatrisation of ulcer. Under treatment still.
5	Female, aged 65	Epithelioma of cheek and eyelid	2 ,,	1 month	21	21 ,,	Almost entirely cicatrised. Small spot left. Under occasional treatment still.
6	Female, aged 47	Epithelioma of nose and eyelid.	10 ,,	8 months	46	70 ,,	Disappearance and complete cicatrisation of ulcer. Local recurrence.
7	Female, aged 68	Carcinoma fibrosum of breast and axillary glands	2 ,,	4 ,,	30	96 ,,	Reduced by one-half. Still swelling of glands. Cicatrix of ulcer up to small spot.
8	Male, aged 45	Epithelioma of tongue and glands	8 months	6 ,,	96	96 ,,	Partial cicatrisation. Glands stationary. Tongue movable.
9	Male, aged 60	Epithelioma of palate and cheek	1 year	4 ,,	125	125 ,,	Reduced to one-third its size. Improved health.
10	Female, aged 38	Carcinoma vaginæ recurrent after amputation of uterus	4 years	3½ ,,	40	40 ,,	Shrinking and cicatrisation of ulcerated parts. Death 7 months later from cancer of pelvis.

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A COMPLICATED CASE OF FRACTURES OF LOWER LIMB, TREATED BY A MODIFICATION OF THE DOUBLE INCLINED PLANE.

BY R. E. INGRAM-JOHNSON, L.S.A.

I WAS called on Feb. 19th, 1891, to an accident at the Morrison Pit of the South Moor Colliery Company. It was stated that several tons of coal had "come away" and fallen on a man, smashing his leg "all to pieces." He had been brought to the surface when I arrived, and the limb had been partially straightened and put on straight splints by some "first aid" men, who had also applied a tourniquet over the middle of the thigh. On examination I found there was a compound comminuted fracture of both tibia and fibula, the tibia about the middle third for about three inches being broken into fragments. The wound admitted of the finger being easily passed in so as to remove one or two loose pieces of bone. There was a second wound extending from just below the knee along the internal border of the tibia downwards for about four inches, and then curving backwards to about the middle line of the back of the leg. This formed a large muscular flap which was turned over backwards. I washed this wound well with 1 in 20 carbolic lotion, brought the edges together with sutures passing deeply through the muscles, and dressed with iodoform. There was some hæmorrhage from the wound communicating with the fracture, so I plugged it with iodoform wool and dusted iodoform on the top. There were two fractures of the femur, one just above the condyles, and another (oblique) at the junction of the middle with the upper third of the shaft. I found a small punctured wound over the upper fracture, but I did not probe it, so cannot say whether it communicated with the fracture or not. The pelvic region and perineum were much bruised and lacerated, there being a great amount of ecchymosis, so that the catheter had to be passed for four days. The left leg was bruised, and there was a wound across the patella exposing the bone. I found that the ordinary Liston's splint would be useless, as there was so much injury to the leg, and as the perineum was too severely bruised to admit of the use of a perineal band; so after putting the thigh up in a temporary box-splint and the leg on a back splint with foot piece, I gave orders at once for a modification of the double inclined plane to be made for me. This consisted of a double inclined plane made of two boards, each twelve inches wide, one extending from underneath the buttocks to the knee, and the other from the knee to four inches below the foot.

In the thigh piece were four slots, two on either side, sixteen inches apart on the outer side, and ten inches apart on the inner side, and two straight splints, one for the outer side to extend the whole length of the thigh piece, and one for the inner side to reach from just below the perineum to the knee. These were each four inches wide, and each provided with iron bolts with screw ends, to work in the slots, so that they might be moved backwards and forwards towards the middle line, so as to fix the thigh when it was brought into position. These bolts were to be secured underneath by winged nuts. In the lower portion of the inclined plane was a foot piece, moving in a slot longitudinally; this was fixed by a nut underneath, which held it perpendicularly as regards the plane. There were also two triangular pieces cut out of the board, leaving a piece in the middle the shape of the leg from two inches below the knee to where the heel would be when the leg was in position. To apply the apparatus, which was done on Feb. 20th, I removed the splints from the thigh piece, padded it, and slipped it under the limb. The femur was then brought into position, and held there whilst I applied the side splints and fixed them. I then put on a straight splint over the top of the thigh, to prevent any upward displacement and bandaged all together. The next thing was to fix the foot to the foot piece; this was done and traction put on the leg till the fracture was reduced and the foot piece was then fixed, and the ankle and leg up to just below the wound were firmly bandaged to the apparatus. The dressings were then applied to the wounds and the limb left undisturbed, except that from time to time the side splints were tightened and the top splint removed to allow of inspection of the fractures.—March 23rd: Removed apparatus, and gave a stimulating liniment to rub the thigh and knee.—25th: Began slight passive movement of knee.—April 6th: Encased thigh in plaster-of-Paris.—10th: Patient was able to move about the house with crutches and left foot in a sling. Large wound almost healed.—May 18th: Removed plaster-of-Paris case.

The patient is now able to walk long distances with only a stick for support. His injured leg is not quite an inch shorter than the other, although several small pieces of necrosed bone have come away from the tibia, and there is still more to come. There is remarkably little necrosis considering the comminution at the seat of fracture. The patient is a man of twenty-four years of age, and of splendid physique. The width of the splint and the position in which the foot piece can be fixed upon it, I claim, has prevented the possibility of any eversion of the foot, and the two triangular spaces on either side of the leg allow of the application of dressings &c. with no pain to the patient or risk of disturbing the fractures. The side splints at the thigh effectually prevent any sideways displacement, and, if combined with a splint at the top, close the limb, as it were, in a box, and prevent any movement of the bone in any direction. Another advantage is that they are easy to tighten or remove. Their removal can be accomplished without any movement of the limb.

South Moor, near Chester-le-Street.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON THE EFFECTS OF INFLUENZA UPON THE MIDDLE EAR.

BY SIR WILLIAM DALBY, F.R.C.S.,
CONSULTING AURAL SURGEON TO ST. GEORGE'S HOSPITAL.

AMONGST the various ulterior effects which the influenza has left upon its subjects it might have been expected that the tract of mucous membrane which lines the middle ear would have been included with tolerable frequency; and although this has in a measure proved to be true, it has occurred in a manner somewhat different from what might have been anticipated. It is true that a certain number of persons during the high temperature stage have for the first time in their lives been attacked with acute inflammation of the middle ear, ending in a few hours with perforation of the tympanic membrane, but these cases, so far as my experience goes, have been comparatively rare; equally rare, it seems to me, have been cases in which persons with ears that have always been healthy have become affected with non-purulent catarrh of the middle ear, combined with obstruction of the Eustachian tubes. I have (in common no doubt with other surgeons) been called to some cases where rapid and acute inflammation of the middle ear has taken place, and to some in which septicæmia has shortly followed, but such instances form a very small proportion to the considerable numbers whom I have observed to be affected in a different manner. These have been confined chiefly to those persons who are and have been for many years the subjects of perforations. There are a good many people who, having perforations, have learned under treatment so successfully to manage them by the use of an absorbent cotton pad that they hear fairly well, and have so minute a quantity of discharge as to be barely noticeable, and in this way continue for many years in a very comfortable condition in respect of hearing and local inconvenience. Many of this class, after an attack of influenza, come back again complaining of further loss in hearing power and greatly increased discharge, which has proved intractable to ordinary measures. The pads have ceased to have their accustomed effect on the hearing for the whole day, and now, in consequence partly of getting soaked with discharge, they are useless. But beyond this the congested condition of the tympanic cavity of itself dulls the hearing so much that the ordinary results of pressure on the stapes are gone for the time. Again, there are many subjects of perforations in whom the cavity of the tympanum has ceased to secrete purulent matter, a condition of a perforation which may be described as dry, and which often remains so for many years. I have observed many of these to resume their previous activity in regard to discharge after an attack of influenza, although for long periods, notwithstanding ordinary colds and exposure to all sorts of variations in climate, they have continued healthy. Thus a person with healthy ears has little to dread from influenza so far as this mucous surface is concerned, but it may become a serious trouble to one whose ears have formerly been the seat of inflammation.

Savile-row, W.

CASE OF HEPATIC ABSCESS.

BY JOHN MCMUNN, L.R.C.S.I., &c.

A SOLDIER, aged thirty-three, of moderate drinking habits, had served six years in the army, two of them in Bengal. He had ague in 1888. While coming through Suez early in November, 1890, his appetite failed. He arrived at Aldershot on the 19th of the same month. Then his eyes looked yellow and his urine was high coloured. On Dec. 1st he became impatient at the hospital, but was discharged in a week. At the time of his discharge he complained of epigastric pain. There was no history of sweats or rigors. When I saw the patient on Jan. 2nd, 1891, he weighed 8½ st., his height being 5 ft. 5½ in. He was worn-looking, anæmic, and slightly jaundiced, with weak pulse, normal temperature, clean tongue, regular bowels, and slight cough. The urine was strongly acid, sp. gr. 1020, clear, plentiful, fragrant, and free from sugar and albumen. He complained of his stomach. There was an epigastric tumour, solid, firm, smooth, rounded, fixed, visible, in diameter three inches, slightly tender, and scarcely moving with respiration. Treatment: quinine, nitro-muriatic acid, and rest. Jan. 10th: Temperature (2 P.M.) 99°; pulse 96.—18th: Doubtful deep fluctuation.—21st: Temperature (2 P.M.) 97·8°; pulse 96.—22nd: Temperature (2 P.M.) 97·8°; pulse 96. The tumour was explored with a needle and afterwards freely opened. Four ounces of thick chocolate-coloured pus escaped. A drainage-tube was inserted, and the whole covered with linseed poultice moistened with carbolic oil. Temperature (6 P.M.) 101°; at 9 P.M. it was normal.—23rd: Sweated a little last night.—26th: Evening temperature 101°. Headache.—27th: Evening temperature 100·5°.—28th: Abundant discharge, which seems to come from a superficial cavity, with an upward inclination from opening. A painful and tender cord runs from the edge of the liver to the umbilicus.—Feb. 3rd: Discharge not so free.—5th: Temperature (6 P.M.) 99°. Headache. Patient not so well.—8th: Tumour, which had gradually shrunk, more prominent, coincidently with decreasing

discharge; evening temperature normal. A probe was allowed to ferret its way through softened tissue for about two inches backwards, suddenly it dropped into a large cavity, and pus welled up in abundance, the passage was enlarged with dressing forceps, and this second cavity drained and dressed with carbolic oil.—18th: Since last date syringed through drainage-tube with Condy's fluid; tube expelled from a shallow dimpled recess representing the wound.—24th: Patient joined regiment October, 1891, in the best of health.

The total amount of matter expelled was about three pints.

Gloucester-road, N.W.

NOMA AS A COMPLICATION OF ENTERIC FEVER.

By JOHN DONALD, M.A., M.B.

As noma is a rare complication of this disease, a few remarks on two cases in which it occurred may prove interesting.

On Sept. 9th, 1891, I began to attend two children, Lizzie B——, aged four, and Jane B——, aged eight, both of whom were found to be suffering from enteric fever. They had been ailing for about a week, Lizzie B—— having been taken ill a day or two before her sister. The symptoms all through were much alike in the two cases, the nervous symptoms predominating. There was marked prostration, and great restlessness and delirium of a low type. The temperature varied from 102·5° to 104°, and the pulse ranged from 110 to 130. Diarrhœa was present in both, but persisted longer, and was with difficulty controlled in the elder. No rash could be found in either case, and there were no lung complications. The tongue was dry and cracked, and there were abundant sordes on the lips and teeth. About Sept. 13th the pulse became very weak, and there was a tendency to heart failure. This was combated with stimulants, given freely in the form of diluted brandy; but it was with difficulty that they were roused from their lethargic condition to partake of this and other necessary nourishment. With the persistence of such a low "typhoid" state, the prognosis was very bad, and when noma set in their recovery was practically hopeless. On Sept. 16th a hard swelling was felt in the right cheek of the younger, which gradually increased in size and got tense and glazed externally. Ulceration took place internally, but the disease did not follow the rapid course that sometimes occurs. The child remained in a comatose condition till Sept. 20th, when she died, before perforation of the cheek had taken place. On Sept. 18th noma was found in the right cheek of the elder girl, and pursued a similar course, till she died, in the same comatose condition, on Sept. 22nd.

Noma as a rule follows on some debilitating disease, but for its development the presence of foul air and bad sanitary arrangements are usually regarded as essential. Here the conditions were present, as the cases occurred in a small, badly ventilated house in a narrow street. In another case, which I saw during convalescence from measles, where a fatal issue likewise took place, the house was permeated with bad smells. It is probable that the micro-organisms supposed to cause this disease gain entrance to the tissues locally, as it is difficult to conceive how they should select such a site, if they were introduced into the circulation in the first place. In the cases of enteric fever referred to it is easy to comprehend that the state of the mucous membrane of the mouth was such as to furnish a suitable spot for the inroad of disease germs. In regard to local treatment, no violent measures were resorted to, as the low, practically hopeless condition of the patients did not seem to warrant any such. So much of the ulcerated tissue as could be scraped easily away was removed, and antiseptic washes were freely employed to cleanse the mouth.

Glasgow.

AN UNUSUAL CASE OF TWINS.

By GEORGE JOHN O'REILLY, L.K.Q.C.P.I., &c.

I ATTENDED Mrs. K—— on the 8th ult. in her fourth confinement. There was nothing unusual to note in the history of this pregnancy, except that she complained of not having felt the movements of the child for some ten days before delivery. During the labour I felt satisfied that I noticed the movements of the fœtus during examination. When delivery was effected an eight months' embryo presented itself in a macerated condition, the cuticle peeling off in several places. When I grasped the uterus to express the placenta I noticed that organ was larger than usual after delivery, and that the surface was lumpy and uneven. I examined per vaginam, but could not detect anything abnormal. I gave a dose of ergot and waited results. Labour pains soon set in, and became stronger every minute, and on again examining I found the head of a second fœtus presenting. After a short time a living child was expelled, and as it was very feeble I had it wrapped in cotton wool, and kept near the fire. The placenta came away within a short time. There was little or no hæmorrhage. The case terminated normally. The mother made a good recovery and was up on the eleventh day. I hardly expected the child to live, and did not weigh it at birth. However, the infant has lived, and takes its nourishment well, and seems to thrive. On the twenty-first day it weighed with cotton wool and shawl 3 lb. 1 oz. A week afterwards it weighed 3 lb. 5 oz. There was only one placenta; the cords of both were attached within a short distance of each other; two-thirds of the placenta were of a livid red colour and of firm consistence, and to this portion the firstborn was attached. The cord was three times as thick as that of the living child, the other one-third portion of placenta was healthy. There was a distinct line of demarcation between the two portions. The stillborn child was unfortunately not weighed, but I should say it was from 4 to 5 lb.

Highgate, N.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

SEAMEN'S HOSPITAL, GREENWICH.

NOTES OF TWO FATAL CASES OF INFLUENZA.

(Under the care of Dr. JOHN ANDERSON, C.I.E.)

THESE two cases are specially interesting, as showing the mode of death in cases of influenza which are not fatal in consequence of bronchitis, pneumonia, or some other similar complications. Both patients died from syncope due to cardiac failure induced by the influenza alone, and in both no cardiac lesion, either of the walls or of the valves, existed. In the second case the histological examination, showing that the heart structure was quite normal, was made by Mr. Hewlett, M.B. Lond., Demonstrator of Bacteriology in King's College. For the report of these cases we are indebted to Dr. M. H. Spencer.

CASE I.—A. C——, a sailor, aged thirty-five, was admitted into the hospital on Jan. 11th, 1892. He was taken ill eleven days before admission with pains "all over him," accompanied by some cough, but had not kept his bed. When he was admitted the temperature was 101·6°; respiration 42; pulse 118. Auscultation revealed only sibilant rhonchus over the greater part of the lungs, with some small râles, most marked over the left lower lobe. No impairment of resonance anywhere over the lungs. The heart sounds were normal. The urine was free from albumen. There was a good deal of cough, with profuse watery expectoration. Ammonia mixture ordered every two hours. For the next two days the patient remained in much the same condition, the temperature still continuing high, ranging between 102·4° and 103·4° at night, and falling to between 99° and 100° in the morning. The dyspnœa, however, had diminished. At midnight on Jan. 14th the pulse for the first time showed signs of failure. Stimulant was freely given, and quinine and digitalis were ordered. On the 15th his condition was much worse. The pulse was 140, and although the bronchial signs over the lungs had diminished

in intensity, he was attacked with urgent paroxysmal dyspnœa, each attack threatening to prove fatal. The expectoration was still profuse and watery. On the following day the dyspnœa had become more constant and was extreme; the countenance was dusky, and there was no improvement in the condition of the pulse. Temperature 103·2°. During the night there was slight hæmoptysis, followed soon after by loss of consciousness, the patient lapsing into a condition of coma, and dying early on the morning of the 19th.

Necropsy.—The body was well nourished. On opening the thorax, both lungs were found to be enormously distended throughout their entire bulk. On the right side the liver was pushed down by the lung, so that its free edge nearly reached the umbilicus. The pulmonary tissue, on section, was greyish and dry; there was no œdema. The heart was natural in appearance except for some thickening of the coronary arteries. The cardiac muscle looked healthy, and there was no dilatation of the ventricles. No evidence of disease was discovered in the other organs.

CASE 2.—E. P——, aged forty-eight, a sailor, was admitted to the hospital on Jan. 19th, 1892. The patient had been ill for six days before admission. His illness began with a shivering fit, which was followed by some cough, which had been increasing lately. During the two days before admission he had been suffering much from pains in the head and back. On admission, his complexion was very dusky. The lungs were resonant all over, the breath sounds were somewhat harsh over the upper lobes in front, and over the right base there were crepitant râles; the tongue was furred; the urine was loaded with urates, and contained a trace of albumen. Temperature 101°. After rising to 103° the temperature on the 21st dropped suddenly to normal, and with this fall of temperature the patient's condition seemed to improve considerably. He progressed favourably until the 27th, when a sudden change for the worse took place in his condition. He was suddenly attacked in the night with oppressive and urgent dyspnœa; the face became livid, and he was to all appearances dying. He rallied, however, after the administration of stimulants. Ether and ammonia with digitalis were given every two hours, and brandy was taken freely. On the next day the pulse, which had showed every sign of failure, had improved, and there was no urgent dyspnœa. Over the lungs there were still crepitant râles and rhonchi at the bases, but no fresh signs. Up to the morning of the 30th this temporary improvement continued, but at 1 P.M. he was again suddenly attacked with urgent dyspnœa; this time the heart showed rapid signs of failure, and the pulse soon became imperceptible at the wrist. There was no improvement after an injection of twenty minims of ether, and he died in about five minutes after the onset of the paroxysm.

Necropsy.—The right lung was pretty generally adherent from old pleurisy. The left was free. There was considerable congestion of both lower lobes, and some œdema of the right upper lobes, but no consolidation. The heart was flabby in appearance, and on its surface there was a rather unusual amount of fat deposited. There was no valvular disease save for some thickening and opacity of the posterior mitral cusp; no mitral or aortic incompetence. Heart muscle: Histologically this was found to be perfectly healthy; striation well marked. There were no traces of either fatty or fibroid degeneration. It was specially stained for micro-organisms, but none were seen. The liver was enlarged and fatty, and the spleen enlarged and soft. The other organs, including the brain, were healthy in appearance.

STROUD GENERAL HOSPITAL.

AMPUTATION AT THE HIP JOINT.—LIGATURE OF THE FEMORAL.—OPERATION FOR COMPOUND FRACTURE OF THE PATELLA.

(Under the care of Mr. STORRY.)

ALTHOUGH these three cases from the Stroud General Hospital present no exceptional features, the results of treatment have been so satisfactory that they are well worth recording. The first case of sarcoma of the femur shows the result of amputation at the hip-joint by the method of Furneaux Jordan, and the advantages of that method; it is, however, too soon to say that there is no likelihood of the appearance of secondary growths. Cases 2 and 3 are notable for the aseptic course of the wounds after operation; this is more especially remarkable in Case 3, where the wound had been inflicted before the man applied for treatment. There is no more satisfactory result of such an injury known to us. For the notes of the cases we are indebted to Mr. A. W. Waller, house surgeon.

CASE 1.—E. W——, tailoress, aged twenty-three, a fairly healthy-looking girl, was admitted into Stroud Hospital on Sept. 24th, 1891, suffering from a tumour at the lower end of the right femur. Her family history was good; both parents were alive and healthy, and no phthisis, syphilis, or malignant disease could be traced in any near relative. Previously she had always enjoyed good health, and had never had any serious malady. In June she first noticed a small swelling at the inner side of the lower end of the right femur, which caused some pain and stiffness on walking, but not at other times. It slowly increased in size, and in August she consulted a medical man, and was given a course of iodide of potassium, the leg being kept at rest on a back splint, and subsequently put into a plaster-of-Paris case. No benefit was obtained by these means and the tumour continued to enlarge until Sept. 24th, when she presented herself at the hospital for treatment. At that time a rounded tumour could be felt situated on the inner condyle of the right femur and occupying an area rather larger than a crown piece. The skin and soft parts were normal and freely movable over it, but the tumour itself was fixed, its outline ill-defined, and it had an elastic semi-fluctuating feel. On deep pressure it was painful, but there was no elevation of temperature and the glands in the groin were neither enlarged nor tender. There was some effusion into the knee-joint, and movement of it caused pain. No organic disease was present, and the urine was free from albumen. Palliative treatment was tried for three weeks, but during that time the tumour very rapidly increased in size until it attained a bulk about as big as half a cricket-ball. As it was evidently a new growth, it was thought desirable to ascertain its pathological characters before operating, so the patient was anæsthetised and a small portion removed for microscopic examination. It proved to be a mixed, small round-celled and spindle celled sarcoma. Amputation at the hip-joint was then advised. Some delay was caused by the reluctance of the patient and her friends to consent to this procedure, and it was not until a week later that she was placed on the operation table, and then suppuration had taken place in the incision, causing the temperature to rise on the previous day to 102°. Ether was the anæsthetic used, and a slight modification of Mr. Furneaux Jordan's method of amputation employed. The limb was rendered bloodless with an elastic bandage and an Esmarch's tourniquet passed round the thigh, as high up as possible, beginning from the front, crossed at the back, the two ends brought up on either side, again crossed over the groin, and then passed round the hips, crossed at back, and hooked in front. A short circular flap of skin and fascia was raised, everything divided down to the bone, and the limb rapidly sawn off about five inches below the great trochanter. The femorals and all other vessels that could be seen were ligatured and the tourniquet removed, but practically no hæmorrhage occurred at this stage of the operation. An incision was next carried up outer side of the stump to a point about midway between the crest of the ilium and the great trochanter, the muscles stripped off, and the rest of the femur extracted by opening and cutting round the capsule. A few vessels spouted, but were at once secured and very little blood was lost. At this time the patient became rather collapsed from the shock, and the pulse was rapid and feeble, but it soon improved after an enema of brandy. The flaps were sutured with silver wire, two large drainage-tubes inserted, and the stump dressed with iodoform gauze and carbolised wool. The patient was removed to bed covered with hot blankets and surrounded with hot water bottles, stimulants being given both by the mouth and rectum. She soon recovered from the anæsthetic without vomiting, but did not rally from the shock for some time, and three hours afterwards her temperature was two degrees (Fahrenheit) below normal. During the night she was restless, but took some nourishment, and on the following morning her temperature had risen to 100·6°, and she was free from pain. On the third day after the operation the temperature rose to

103°; the discharge soaked through the dressings, so they were removed and the stump redressed. It was looking remarkably well and free from inflammation. On the sixth day it was again dressed; the flaps were found to be uniting well, but there was still a considerable amount of discharge, and a little pus oozed from one point. For the next month it continued to progress favourably, and all healed with the exception of a short sinus which formed at the outer corner of the stump, and continued to discharge. She, however, gradually regained her strength, and a week before leaving hospital was able, with assistance, to attempt to get about on crutches. On Dec. 9th, seven weeks after the operation, she was discharged. She has since been under supervision, and has made almost uninterrupted progress. Lately, however, she has at times complained of rather severe paroxysms of occipital headache lasting for an hour or so, and occasionally accompanied by vomiting, but she has no optic neuritis, and the attacks do not seem to affect her general health. The stump is healthy, the cicatrix firm, and remains soundly healed. With the aid of iron and cod-liver oil she is putting on flesh, appears brighter, and is, to some extent, able to resume her old occupation as a tailoress.

CASE 2.—J. P——, aged forty-seven, a contractor, was admitted into Stroud Hospital suffering from an aneurysm of the left popliteal artery. He was a stoutly built, healthy looking man, but inclined to be plethoric. He gave a good family history, none of his relatives having suffered from any hereditary disease. His own health had always been good with the exception of an occasional attack of gout. There was no history of syphilis. He stated that two months previously to admission he had strained his knee in lifting a sack, and this had been followed by pain and stiffness in the joint for about a month, after which he noticed a swelling at the back of the knee, which gradually increased in size. On admission, on July 22nd, 1890, all the signs of a sacculated popliteal aneurysm were well marked. The left popliteal space was occupied by a circumscribed ovoid tumour about the size of a hen's egg, pulsating with an expansile impulse, immediately checked by pressure on the femoral artery. There was no thrill over it, but a soft bruit could be heard on auscultation. The knee was semi-flexed and movement painful and limited. There was also slight œdema around the ankle. The posterior tibial artery could be felt pulsating, but not the anterior. There were no signs of an aneurysm anywhere else, and the radials appeared to be normal and free from atheroma. The other organs were healthy, and there was no albumen in the urine. As sufficient assistance for continued pressure on the femoral was not obtainable, it was decided to ligature the femoral artery. This was done on July 23rd. The artery was exposed at the apex of Scarpa's triangle by the usual incision, a No. 3 chromicised catgut ligature passed round it through a small opening in its sheath, and firmly tied. A drainage-tube was inserted, the wound closed, stitched with silver wire and dressed antiseptically; the whole limb was then enveloped in cotton-wool. All pulsation in the sac was immediately arrested and its size slightly diminished. After the operation the limb became cold and the foot rather dark coloured, but in about three hours it began to lose its lividity, to feel warmer, and regain its normal appearance. Next day the sac felt firmer, and was entirely free from all pulsation. The tibial arteries could not be felt, but the limb was warm, though slightly œdematous. There was very little pain, but there was a feeling of numbness and tingling. During the next few days the leg, and especially the foot, became very painful, necessitating the use of hypodermic injections of morphia. The sac remained free from the slightest pulsation, and was perceptibly contracted and consolidated. No pulse could be detected in either of the tibials at the ankle. At the end of a fortnight the operation wound had united by first intention, and was entirely healed. The pain had ceased; all œdema had subsided, but the limb remained stiff and weak. On Aug. 18th the patient left the hospital. The aneurysmal sac was then very much diminished in size, was hard, the limb could be moved without pain, and the patient could bear some weight on it. He was provided with crutches, and not allowed to put the foot to the ground. In August last, thirteen months after the artery was ligatured, he was again seen and examined. No sign of the aneurysm could be felt in the popliteal space, nor could any pulsation be detected in either of the tibial arteries. The movements of the leg were perfect. The man complained of occasional numbness and pain about the instep, which at times even kept him awake at night, but otherwise he was as well as ever, and was able to attend to his business without the slightest inconvenience.

CASE 3.—H. H——, aged twenty-eight, a timber hauler, was assisting to move some timber on March 31st, 1890, when he slipped and fell, falling with his right knee, which was flexed, upon the edge of a triangular iron instrument called a "scraper," used for scraping the bark from timber. On admission to the hospital a few hours after the accident the following condition of the joint was found. There was a transverse wound about three inches long running across the patella, cutting directly down to the bone and completely opening up the knee-joint. The patella was fractured into three pieces. The upper fragment consisted of nearly half the patella itself, the lower part of the bone was divided into two fragments, one small piece of bone was lying almost loose, separated from the surrounding tissues, whilst the other fragment and larger portion was still attached to the ligamentum patellæ. The patient was immediately put under ether, when Mr. Storry enlarged the incision transversely right and left, removed altogether the smaller loose portion of the lower half of the patella, and, having cleaned and cut off some sharp corners of bone, sutured the remaining upper and lower fragments with two wire sutures, leaving the ends long and outside the skin wound. The portions of bone came into excellent position, but left a small gap where the loose portion had been removed. Two openings were made into the joint on either side of the patella, and drainage-tubes inserted. The joint was well syringed out with (1 in 20) carbolic solution, while the skin wound was brought accurately together with catgut sutures and dressed with iodoform and boracic wool, and the limb placed on a McIntyre's splint. There is nothing much to record after the operation, the temperature never rose above 100° F., and the joint was dressed for the first time four days after the operation, when the drainage-tubes were removed. The leg was dressed once a week for the next fortnight. Subsequently, when an attempt was made to unwind and withdraw the wire sutures from the patella, the wire in each case broke off short close to the bone, and was consequently left alone. The limb was put up in a plaster-of-Paris casing, and the patient was allowed out of bed with crutches six weeks after the operation. In November, 1890, eight months after the operation, the patient was examined by Mr. Storry, who found the knee-joint perfectly useful. Absolute bony union had occurred, and scarcely a ridge could be felt where the bone had become united. The man had been at work for a month, and declared he could use the joint as well as ever, and had felt no inconvenience from the wire sutures which were left in the patella. In February, 1891, he was again seen, when he was doing his old work of timber hauling, the movements of the joint remained perfect, and he could even kneel on it without any discomfort.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Discussion on Phagocytosis and Immunity.

AT the meeting of the Society on the 16th inst. the PRESIDENT introduced the subject in a few words. The discussion was to show how the blood dealt with morbid material introduced into it. He then called upon Professor SIMS WOODHEAD, who in his address said that the phagocyte theory was closely associated either with "chemiotaxis" or the humoral theory. The latter appeared to be in direct opposition to Metchnikoff's theory, though there was an attempt now being made at a reconciliation and combination of the two. At present he was in favour of the theory of phagocytosis. Metchnikoff and Buchner must be regarded as the leaders of the two sides in this controversy, though the result of their work was now being corroborated or disproved by others. Metchnikoff's view was that amœboid cells, in contact with micro-organisms, retained their activity

and function, whilst the incorporated germs died and disintegrated. Many leucocytes appeared to have lost this power; but as a primitive function of protoplasm it was capable of being stimulated into action when required. Although so much stress had been laid on leucocytes at first, it had been shown later that not all the cells concerned were true leucocytes, but were fixed tissue cells deprived of their processes and occupied by a large nucleus. These were the microphages or final phagocytes, and were far more active and aggressive than the macrophages or leucocytes. Their ordinary function was to remove useless effete matter, but they appeared to combine together in the performance of the more difficult task of attacking living organisms. The amœboid cells were limited largely to the removal of innocuous material, organic or inorganic, which was a different form of the phagocytic function. It had been shown that the mesoderm cells in sponge were capable of attacking and digesting a living organism like leptothrix, and it was assumed that the scavengering power still remained, but that the attacking power had been lost by disuse. Tissue resistance meant power of reaction of its cells, and cells, which in the first instance would be destroyed by invading bacteria, might by acclimatisation acquire the power of resisting them. He then referred to Metchnikoff's original experiments with the Daphnia and the mode of absorption of the Monospora bicuspidata, and proceeded to discuss the question of erysipelas, in which it was alleged that the streptococci were outside the zone of leucocytes, so that if the cells played any part it must have been in removing dead organisms killed by the fluid extruded. With regard to this, he would say that "what was sauce for the goose was sauce for the gander," and there was no more evidence for this mode of destruction than for digestion in the first instance by the cells. Recently Metchnikoff laid more stress on the action of fixed cells. Anthrax bacilli had been demonstrated within leucocytes, stained by aniline dyes. Inasmuch as bacilli stain when dead, this was no evidence of their ingestion, whilst living; but Metchnikoff had shown that vegetable germs retained the power of reproduction by isolating three such cells with the contained organisms and obtaining a pure culture. Although thoroughly degenerated bacilli did not take the stain, in some cases, where cells were breaking down owing to the bacilli being numerous and getting the upper hand, the organisms stained perfectly. In Frank's experiment on rats one only died out of twenty-two; the bacillus anthracis was killed *in situ*, being localised by the density of the tissue and the congregation of leucocytes. The idea of chemiotaxis was originally suggested by botanists. Experiments showed that deleterious materials were avoided, whilst nutrient ones were taken up and inert ones were not regarded; but after a time the cells became accustomed to the first variety and approached them. Metchnikoff stated that similar phases occurred in the body, and that with the gradual increase of poison its paralysing effect was not produced, and it was treated as inert matter. In opposition to this, Emmerich and Mattei suggested the presence of an anti-biotic fluid constituting the products of bacteria. They afterwards receded from this, and attributed its production to the cells of the host. This condition of "acclimatisation" Buchner pointed out might be maintained, but was usually soon lost. This process of chemotaxis and getting rid of devitalised microbes he looked upon as the cause of recovery and acquirement of immunity in acute germ disease. There were instances where the same substance in different degrees of dilution either attracted or repelled cells, and it was shown by Schultz that yeast was actually more active in *dilute* solutions of corrosive sublimate, iodine, or carbolic acid than in simple solutions. To demonstrate the difference in action between fluids and cells of the body upon micro-organisms pathogenic organisms were enclosed in paper or pith envelopes and inserted under the skin of animals. Under these conditions growth and development continued within, whilst the animal, though susceptible, did not suffer from the specific disease. Here fluids had free access, the cells alone being excluded. These processes, however, could not be considered the sole factors. It would seem as though the reacting and congregating leucocytes constituted the first line of defence, the epithelium of the capillaries and lymph tracts the second, and when these were broken through the animal system lay at the mercy of the invading germs. It had been suggested that by breaking up the leucocytes some bactericidal material might be set free, as was suggested by the action of quinine in certain diseases; but on experiment it was found that animals inoculated after treatment in this way died sooner than the "controls," and it was concluded that active leucocytes exerted the more powerful resistance. Diphtheria and tetanus were instances of toxæmia due to development of bacteria in unhealthy areas of the system or their introduction in large numbers, and could be resisted by destroying the bacteria before this toxine could be produced in sufficient quantity to give rise to the characteristic symptoms. Immunity could be established by the system becoming accustomed to small doses of the poison. It was an extremely difficult thing to account for special immunities for the several diseases. Many theories had been proposed and disposed of without a satisfactory explanation being arrived at.

Dr. BURDON SANDERSON declared that he was an opponent of the theory of phagocytosis, and said that he would endeavour to place before the Society the difficulties that he and those who thought with him had in accepting the theory. He would only touch the question of the action of the leucocytes. The facts themselves were not in dispute, but the interpretation of them might, he thought, be found without ascribing to leucocytes any other than their known physiological properties; whereas those who believed in phagocytosis allowed to leucocytes an extraordinary power which was not in accordance with the accepted principles of biology. An organism as a whole, such as a human being, had a certain power of recovering from injuries and of resisting micro-organisms, which might reasonably be termed a specific power. All were agreed that on the invasion of the organism by an exciting cause of disease leucocytes collected at the point of entry. Those who believed in phagocytosis attributed this to a specific power of the leucocyte to counteract the particular disease, and not to their ordinary physiological properties. These latter were essentially three: (1) Amœboid movements; (2) the power of incorporating solid particles; and (3) their subjection to a kind of allurement or repulsion which many substances had over them, known as "chemiotaxis." Whenever an injury happened to the body, provided it was of moderate intensity and capable of producing ordinary inflammation, a migration of leucocytes towards the injured spot set in. The explanation was that so long as the surroundings were normal the leucocytes remained quiescent, but that as soon as a devitalisation of any part occurred, a flow of leucocytes from the normal to the abnormal part set in, and that this was a physiological process was shown from the fact that it occurred during the absorption of a tadpole's tail. As the movements of leucocytes were independent of the nervous system, it would be as reasonable to attribute to the tadpole's leucocytes an appreciation of the advantage which would accrue to the frog from an absorption of its tadpole tail as it was to ascribe to the leucocytes the wonderful specific power of acting differently to the various specific infections.

Professor KLEIN admitted his inability to accept the arguments advanced by the supporters of the phagocyte theory, and in support of his position he stated that the question of phagocytosis embraced a very much wider field of observation than was included in the views already advanced. Some investigators included all instances in which bacteria were found engulphed in cells. This, he contended, was the first error, and illustrated his remark by exhibiting a number of photo-micrographs showing a dozen instances of micro-organisms contained in cells which were breaking down under their influence, thus reversing the process described. He said that the influence of chemiotaxis, as shown in the cells of bile-ducts in which psorosperms were growing, was of quite a different nature to that asserted. In the many cases of immunity in which inoculation was not followed by disease, were the bacilli killed by leucocytes or some other agent, or by the two in combination? He referred to the experiment of Emmerich and Mattei, in which it was shown that the micrococcus of swine erysipelas, which would kill a rabbit when injected subcutaneously, did not do so when introduced into the circulation; and further, that an animal so treated acquired immunity from infectability by subsequent inoculation, and that phagocytes cannot then be found at its site. Reference was made also to the observation of Metchnikoff—that after forty-eight hours living bacilli can still be found in the blood of an immune animal; but it was stated that in such cases there

was not a commensurate number of cells containing the micro-organisms. In the dog, cat, and rat, which were insusceptible, it was extremely difficult to find any adequate number of bacillus-bearing cells after inoculation. In the next place, he would ask if there were any well-established cases in which bacilli were known to have been destroyed by lymph or other juices—and here he alluded to experiments being carried out by Dr. Frederick Andrewes, and which showed that pus already dead, and even when twenty-four hours out of the body, had a rapidly noxious effect upon these organisms. When anthrax was introduced into the dorsal lymph sac of a frog hours elapsed before any bacilli were seen enclosed in cells, the lymph itself being capable of destroying them. Professor Klein then gave an account of some experiments, in which it was found that a rapid diminution in bacilli occurred within two hours of their introduction into the body, which was not at all in accordance with the time observed in their gradual approach and engulfment by cells. He thought it was much simpler to assume that the juices of the body were germicidal, though Buchner's explanation gives little account of what takes place with regard to the bacilli after they are weakened by exposure to them, as to whether they are then taken up and carried away by cells, acting as scavengers. That important part of the cell's duty had yet to be proved.

Mr. KANTHACK said the question at issue was "whether immunity from infective diseases or lesions was caused by phagocytosis—that is, through the phagocytes alone and through nothing else." The chief points are: I. The influence of the body fluids; II. Chemiotaxis; III. Phagocytosis. I. Do the living fluids of the body play no part in the production of immunity? The serum of many animals has a marked bactericidal power outside the body, but we cannot establish any general law, because there is no necessary correlation between the natural insusceptibility of an animal to a disease and the bactericidal power of its serum over the microbe causing such disease. This has been put forward as a grave objection to the so-called humoral theory. But he thought wrongly, for it is impossible to draw any logical inference as to the artificial causation of immunity by contrasting a naturally immune animal with a naturally susceptible one. In future, experiments should be made in such a manner that the bactericidal power of the serum of a naturally susceptible animal be tested (*a*) before it has been immunised, and (*b*) after it has been artificially immunised. If, then, any law can be established, we must expect to find one or more of three conditions—namely, after the acquisition of immunity the serum should be (1) either more bactericidal, (2) or possess greater attenuating powers, (3) or possess greater destructive power over the toxines of the microbes. It is too narrow to judge by the bactericidal power alone, for it is impossible to disconnect the bacteria from their metabolic products, and it is these which cause the disease. As long as the poison is not neutralised, it matters not whether the bacilli are eventually killed or not. To give examples, we find—(1) Under the first heading that (*a*) the serum of a guinea-pig after artificial immunisation kills the vibrio Metchnikovi; (*b*) the serum of a guinea-pig after immunisation has greater bactericidal power over the bacillus Chauvœi. As an exception, we may mention the serum of a sheep protected against anthrax. But, on the other hand, Christmas succeeded in extracting from the organs of an immunised rabbit a substance which had greater destructive power over the anthrax bacillus than a substance similarly extracted from the organs of a rabbit not protected against anthrax. According to Bouchard, it has been proved for nine infective processes that the serum of the immunised animal has greater bactericidal power than the serum of the same animal in the non-immunised condition. These are anthrax, charbon symptomatique, cholera, erysipelas, diphtheria, tetanus, pneumonia, and the lesions caused by the vibrio Metchnikovi and the bacillus pyocyaneus. (2) Under the second heading we find that (*a*) the serum of an immunised rabbit attenuates the streptococcus of erysipelas; (*b*) the serum of an immunised rabbit attenuates the bacillus pyocyaneus. (3) Finally, under the third heading, we find that (*a*) the serum of an immunised animal neutralises the tetanus toxine; (*b* and *c*) the same has been asserted with regard to the toxines of diphtheria and pneumonia. (1) Those who object to test-tube experiments as being artificial do not hesitate to use little paper bags filled with germs, and place them under the skin of refractory or immunised animals. Such experiments are as little natural as test-tube researches, for (*a*) we thus localise the process by artificial means; (*b*) the fluid which passes through the paper may be of an inflammatory nature, and is not necessarily the same as the normal body fluids. In studying the artificial production of immunity, the absolute followers of Metchnikoff are prone to neglect the most important part in the causation of infective diseases and lesions—namely, the chemical products of the microbes which undoubtedly cause the phenomena of such diseases. (*a*) We find that an animal made immune against a living microbe can also resist the toxine of such microbe to varying degrees. Examples are tetanus, pneumonia, diphtheria, vibrio Metchnikovi, pyocyaneus, charbon symptomatique, and others. (*b*) *Vice versâ*, an animal made immune against the toxine also resists the living microbe. Therefore the processes responsible for these results must assumedly be the same. Now immunity against toxines cannot in any way whatever be explained by means of phagocytosis. He concludes, therefore, that at the present state of knowledge it is impossible to assert that the living plasma (or body fluids) are of no consequence. 2. Chemiotaxis has of late been introduced as a welcome support to the phagocytic theory. Certain chemical substances, according to their degree of concentration, attract or repel the phagocytes, but if the phagocytes are in a medium already containing these chemical substances, equally distributed, they will not be attracted on adding more of these substances unless they be added in a highly concentrated condition. Analysing this, we have three possible cases:—(*a*) The metabolic products of the microbe are present in equal quantity in the tissues and at the seat of lesion, therefore no migration of phagocytes can take place. (*b*) If the degree of concentration is higher at the seat of lesion, we shall have a migration of phagocytes thereto. (*c*) If the degree of concentration is higher in the blood, the phagocytes may migrate back into the blood. This teaches us nothing as to the acquisition of immunity, for (1) if true, it is simply a statement of concomitant facts; (2) on such a view our successes in the production of immunity become merely a matter of chance and good fortune; (3) it supposes, without the slightest foundation, that in an animal immunised against a microbe, the toxine of such microbe circulates in its vessels; and, lastly, it neglects the fact that, besides diapedesis, we have, as a rule, hand in hand with positive chemiotaxis, a great general increase of phagocytes and leucocytes, depending of necessity on a stimulation not of the leucocytes and phagocytes, but of the elements giving birth to these bodies. Hertwig, in his monograph, sums up this theory in the following manner: "(*a*) In an immunised organism the negative chemiotaxis, which the body exhibited before being made immune, has been replaced by a chemiotaxis behaving positively towards the specific virus." If so, we ask, Why and how? We are also told that "the effects of the metabolic products of microbes show themselves as positive and negative chemiotropism and also as acquired irritability (Reiznachwirkung). The existence of positive chemiotropism explains the localisation of the virus through the attraction of leucocytes and subsequent phagocytosis. The existence of negative chemiotropism explains the possibility of a general infection by means of a diffusion of the micro-organisms. By means of suitable injections of bacillary products a negative may be changed into a positive chemiotaxis, and thus a cure be effected." This is mystical and unsatisfactory, and treats of the body as though it were a specimen on the microscopic slide. 1. By causing fever artificially in a susceptible animal, two or three hours after the temperature has begun to rise considerably there is a very great increase of leucocytes, not only of the so-called lympho-cytes, but also of the larger elements, and this leucocytosis persists for more than twelve hours. On inoculating the animal when in this condition with anthrax it will die just as usual; yet here the army of phagocytes was increased at least tenfold. 2. Thus the increased number of phagocytes *per se* is not sufficient. They require also the special training. And here we come to the most unsatisfactory part of the theory. Before an animal is immunised the phagocytes are more or less inert against a particular microbe, but as soon as ever a relative immunity is established they are extremely voracious. We must ask, why does phagocytosis appear now or why are the cells suddenly enabled to destroy what previously perhaps killed them? 3. The occurrence and importance of vaccine fever during

the process of immunisation points to more general changes than a mere change of habit of the phagocyte alone. 4. That changes occur in all the tissues has been shown by Emmerich, who succeeded in protecting animals by inoculating them with the tissue juices of such as had been immunised. 5. Some of the methods of immunisation, as the injection of so-called antitoxine, or of small repeated doses of poison, &c., point strongly to general changes in the body, the phagocytes being altered with the rest of the body. 6. Lastly, phagocytosis does by no means explain many of the phenomena mentioned in the first part of the discourse.

MEDICAL SOCIETY OF LONDON.

On the Cure or Subsidence of Ascites due to Hepatic Disease.—Hæmatemesis, with Special Reference to that Form met with in Females in Early Adult Life.

AN ordinary meeting of this Society was held on Feb. 15th, the President, Dr. Douglas Powell, in the chair.

Dr. J. S. BRISTOWE read a paper on the Cure or Subsidence of Ascites due to Hepatic Disease. He took as his text four cases which were under observation up to the present time. 1. A governess, aged forty-four, who came to St. Thomas's Hospital in the summer of 1886. She was depressed and lacrymose, and suffered from delirium and hallucinations. She had jaundice, ascites, œdema of the legs, and diarrhœa; also suffering from bronchitis and an attack of poly-arthritis during her stay of nine months and a half. There was no albuminuria and no enlargement of veins. Five, thirty-two, and thirty-four pints of fluid were removed by paracentesis abdominis on three several occasions, and she left greatly improved on May 24th, 1887. She was again admitted on Aug. 29th, 1889. Her complexion was sallow, she still had bronchitis, and eighteen and twenty pints of fluid were removed from the abdomen. She left on Jan. 12th, 1890, and has continued well since except for the bronchitis. She was seen last week. The case was a typical one of chronic alcoholism, as was borne out by the mental condition, and an attack of peripheral neuritis on the second occasion, and it may be accepted that the ascites was due to cirrhosis of the liver which still existed, and was liable to induce a recurrence of the ascites. 2. A gentleman aged thirty-five who had fallen into intemperate and immoral habits in 1878. He was lost sight of till Oct. 8th, 1882; he was then weak and thin, suffered from sickness, and for three weeks had had œdema of the feet and ascites. On Nov. 20th he was worse, was irritable and rambling, and had in addition some fluid in the left pleura. On Nov. 22nd he was admitted to St. Thomas's Home, with jaundice and dyspnœa, the left pleural and the peritoneal cavities being full of fluid. A month later he was improved in all respects. Three pints of fluid had been removed from the pleura, and he left on Jan. 24th, 1883, for New Zealand, where he has remained in fairly good health. Here, again, was a very clear alcoholic history; and though the ascites got well without tapping, there could be no doubt, from the fact of the development of this form of dropsy and of jaundice, that his liver was at that time affected with early cirrhosis. 3. A man in good circumstances, aged forty, who kept an eating-house. He was known to drink many glasses of spirits daily, and was seen in consultation on Oct. 24th, 1888. His complexion for some time had been sallow, and for six weeks there had been enlargement of the abdomen and œdema of the legs. In addition the liver was enlarged and there was jaundice. He was enjoined to abstain from alcohol, to take a tonic and a pill of mercury digitalis and squill. He was tapped five times; nine, thirteen and a half, nineteen and a half, nineteen, and fifteen pints being removed. On Dec. 28th the liver was smaller, and he had gained flesh; four tappings were performed since, the quantity of fluid removed being eight to sixteen pints, the last occasion being in August, 1889. After that he went to Vichy, and on his return took cold and was laid up with bronchitis and pleurisy. He was tapped again on Feb. 5th and March 3rd, and twice since, and has been taking 1-16th of a grain of iodine off and on. On Feb. 8th, 1892, he was in excellent health and spirits, and carried on his business with his old energy, going to market three times a week, but he continued to take gin-and-water. In this case paracentesis was performed fourteen times in the course of a year and ten months, the alcoholic history was indisputable, and that the ascites depended upon the hepatic disease is shown both by the enlargement of the liver and the temporary jaundice. 4. A lady, aged twenty-four, belonging to a respectable and wealthy family, with small and delicate physique, and usually enjoying good health, was seen April 30th, 1890. At the end of the preceding year she had a sudden and profuse attack of hæmatemesis while abroad; there was a recurrence on arriving at a seaport in England, and since reaching home there had been two more, the last on the day preceding the consultation. Latterly there had been pain and uneasiness after food, with loss of appetite. She was anæmic and weak, and was treated for the ensuing twelve days as a case of simple ulcer of the stomach, with great improvement. The abdomen then filled rapidly in three days. Eleven pints were removed on May 15th, and by the 28th paracentesis had been performed three times, nine pints being withdrawn on each occasion. The liver was now found to be enlarged. The general health had improved, and the gastric symptoms had disappeared. After another tapping a small nodule could be felt, and the idea of cancer was entertained. In June she was tapped four times, the quantity removed being from four to fifteen pints. It was then found out that a brother had been under treatment for a congenital syphilitic affection of the eye. This led to the diagnosis of syphilis, and iodide of potassium was prescribed in ten-grain doses. Later the quantity was increased and mercury was added. In August she was tapped four times, and in September thrice, the quantity being from four to seven pints. Altogether paracentesis was performed twenty-seven times, the last occasion being Sept. 22nd, 1890. She was now better than she had been for years. The causes of obstruction were threefold: 1. True cirrhosis affecting the small vessels and capillaries. 2. Cancerous and syphilitic growths occupying the transverse fissure compressing or involving the portal trunk, and occlusion by thrombi. 3. Obstructive disease of the heart or lungs causing "nutmeg" liver. The first three cases belonged to the first and the fourth to the second class. With regard to the mode of recovery in these cases, it was, in the first place, amply proved that there is a fairly free communication between the portal vein and the systemic veins, and hence when portal obstruction exists there is a tendency for the blood of the portal circulation to be shunted into some of these other veins which gradually dilate, so that without any beneficial change in the liver itself the ascites may disappear. The œsophagus, as shown by Drs. Wilson and Radcliff, has a ring of veins which is largely concerned in the process, and the consequent varicose condition of the submucous veins in this part and their tendency to rupture are the source of the profuse hæmoptysis and melæna in the late stages, though the vessels of the stomach and duodenum are the ones affected at first. Sometimes, however, there is no evidence that the anastomosing veins have dilated, and on this supposition alone recurrence of ascites after renewal of bad habits would be inexplicable. Moreover, in the case of a chronic inflammatory process dependent on an irritant locally applied, cessation of the influence would be likely to be followed not only by arrest of the disease, but also by some amelioration in so much of it as had recently occurred and was amenable to treatment. In the first three cases there was jaundice, which implied a wider or profounder change than that producing ascites, and which subsided. Again, as in Case 4, there are causes of obstruction which are removable. The efficacy of treatment depends largely on the accuracy of diagnosis. Doubtless there are many cases of visceral syphilis which are misinterpreted to the detriment of the patient. A simple and fairly successful treatment is to promote the general health by suitable diet and tonics, to cut off alcohol, to tap from time to time without waiting for extreme distension, and to regulate the bowels. Bearing in mind the tendency to spontaneous diarrhœa, purgative measures were not to be recommended, and diaphoretics were of little use; more was to be hoped for from diuretics, especially copaiba in ten-grain doses and the pill of mercury, digitalis, and squill. There was no objection to the use of mercury and iodide of potassium in the early stages.—The PRESIDENT, referring to œdema of the legs, said he should be inclined to attribute it rather to the general condition of the heart and circulation, and he thought that rest and deprivation of alcohol was to some extent answerable for the improvement that took place under treatment, apart from local considerations.—Dr. HAVILAND HALL suggested

that repeated tapping was liable to produce peritonitis and adhesions, thus introducing fresh areas for absorption and collateral circulation, and cited an illustrative case. He referred to some of the drugs recommended for cirrhosis.—Dr. HADDEN mentioned a necropsy recently made on a man who fourteen years before had been a patient with cirrhosis hepatis and ascites under Dr. Murchison, and was tapped. The cirrhosis was well marked, but there was no ascites, and death was due to other causes.—Mr. MARMADUKE SHEILD, referring to paracentesis, said that great care was needed to ensure absolute cleanliness of the instruments, and that the fluid should be evacuated slowly through a fine trochar. He thought the very rapid dropsy in the fourth case suggested thrombosis. The presence of retinitis or choroiditis afforded the best indication of congenital syphilis.—Sir HUGH BEEVOR mentioned a case in which great œdema of the legs occurred in an alcoholic subject, there being nothing to explain it. In another case of cirrhosis the gradual dilatation of veins on the right side of the abdomen was obvious to the sight.—Dr. SIDNEY PHILLIPS mentioned a case not syphilitic, which cleared up under iodide of potassium, and he thought this a good drug to give in cirrhosis hepatis, in doses up to forty grains, three times a day.—Dr. PASTEUR, referring to the ascites of young children, said that many of them were doubtless due to tubercle, and cleared up.—Dr. BRISTOWE, in reply, said he regarded œdema of the legs as due to the collection of fluid in the pelvis and pressure on veins there. He mentioned other cases similar to those quoted, but of which the notes were less complete. He thought the examination of the eyes was of great value in recognising syphilis, but said that the signs were so slight as to have been overlooked by skilled observers. In young children tubercle, alcoholic cirrhosis, and congenital syphilis had to be considered in the production of ascites.

Dr. DONALD HOOD read a paper on the Hæmatemesis of Early Adult Life in Females. The author wished to draw attention to the clinical phenomena accompanying this form of hæmorrhage, stating that from his own experience of the symptom he would feel inclined, in a large majority of instances, to look upon it as but denoting a state of passive congestion, or stasis in the vessels of the stomach, and as being directly due to the anæmic condition so generally found accompanying this form of hæmorrhage, and not necessarily the result of ulceration. His personal experience is confined to about forty cases, and as supplemental to these he brought before the Society 155 cases collected for him by Dr. Goodall, late Medical Registrar to Guy's Hospital, from the clinical and pathological records of that hospital during a period of twenty years. It was noted that during that period no case is recorded at Guy's Hospital of a young girl succumbing to an attack of hæmatemesis due to gastric ulcer. During the same period of twenty years sixteen patients were admitted suffering from a fatal peritonitis, the result of a perforating ulcer. Eight were men and eight were women. Ulcer of the stomach, regarded as causal in producing fatal peritonitis, is equally fatal to both sexes, and at much the same time of life. It was asked why it should not be equally causal with regard to hæmorrhage; clinically severe hæmorrhage, excepting as the result of incipient cirrhosis, being markedly rare among males in early life. In discussing the etiology of hæmatemesis, cases would appear to fall into one of three fairly well-defined groups—the period of early adult life, largely composed of anæmic girls, and comprising the cases referred to by the author; the period of middle life, in which the hæmorrhage is usually due to cirrhosis or ulceration, hæmorrhage from cirrhosis being much more frequent among the female sex than is supposed to be the case; and, lastly, the period of advanced life, in which malignant disease and ulceration are about equally met with. In the course of the communication reference was made to two cases published by the late Dr. Murchison, in which a minute pore-like orifice was found leading into a bloodvessel. In both of these repeated attacks of hæmatemesis occurred before death. Hæmatemesis is so frequently found accompanying the anæmia of girl life that it would appear to be one of the results of that profound blood change, and when the gastric symptoms of anæmia are compared carefully with those due to ulceration of the stomach, a marked difference will usually be found to exist, the stomach symptoms of anæmia being generally of less intensity. The author considered the matter as one of importance, having special regard to treatment, for he maintained that in a very large majority of cases of hæmatemesis occurring in early adult female life and complicated with anæmia, a treatment based on saline aperients combined with iron will give better results than one which would be urgently demanded if an ulcer of the stomach were the source of hæmorrhage.—Dr. HABERSHON acknowledged that these cases did not afford proofs by post-mortem examination, and referred to the long experience of Dr. Brinton and of the late Dr. Habershon, which left the impression in their minds that actual ulceration did occur, though it was often no doubt superficial. In many cases the hæmatemesis appeared to occur at what would be the menstrual period in girls suffering from anæmia and amenorrhœa.—Dr. SIDNEY PHILLIPS pointed out that the two main points were (1) the occurrence of gastric ulcer without hæmatemesis, and (2) (?) the occurrence of hæmatemesis without gastric ulcer. He mentioned cases in men and women in whom sudden hæmatemesis had caused death, and no lesion had been discovered post mortem. Some cases of hæmatemesis were associated with violent pulsation of the aorta, pain and vomiting, and hypochondriasis.—The PRESIDENT alluded to cases which had proved fatal and in which no lesion had been discovered post mortem. He referred to a specimen in the Middlesex Hospital museum in which a minute aneurysm had ruptured, and suggested this as a possible cause. He noticed that patients usually got well rapidly after the occurrence of hæmorrhage, possibly through the clot affording some protection to the site.—Dr. HOOD, in reply, mentioned two patients in whom there had been no hæmatemesis, but in whom a large number of healed ulcers were found in the stomach after death. He remarked on the wonderful rapidity of recovery after hæmorrhage. His plan of treatment was to give nothing by the mouth for two days, then small doses of opium, feeding by enemata.

CLINICAL SOCIETY OF LONDON.

Perforation of the Vermiform Appendix.—Acute Appendicitis.—Relapsing Appendicitis.

AN ordinary meeting of the Society was held on Friday, Feb. 12th, the President, Sir Dyce Duckworth, in the chair.

Dr. D. B. LEES read notes of four cases of Perforation of the Vermiform Appendix. Case 1: A man aged twenty-seven was admitted into St. Mary's Hospital on Oct. 17th, 1890, with a history of having caught cold on the 15th, followed the next morning by pain in the right iliac fossa, which came on gradually. The bowels had been regular, but he had vomited. There was moderate distension of the abdomen, with some tenderness over the appendix. He diagnosed a lesion of the appendix, but in view of the mildness of the symptoms did not deem it necessary to interfere. In twenty-four hours, however, the man was in a hopeless condition. At 9 P.M. he began to vomit, the matter being at first dark green and then black, and he died six hours later—less than four days from the onset of the attack. Post mortem the appendix was seen to be perforated at the tip, and contained concretions. A section of one of the larger concretions showed a white nucleus enveloped in white stratified layers. It was evident that the concretions had formed within the appendix and had been there some time previously to the illness. Case 2: A lad aged seventeen was admitted on Nov. 22nd, 1890. He had been seized with a sudden sharp pain in the right iliac region on the 20th. It grew worse, and he vomited. The abdomen was moderately distended, tympanitic all over, and tender on pressure. No lump could be felt. Dr. Lees called in Mr. Page, and some hours later the appendix was cut down upon and found to be perforated, outside which a concretion was seen. There was some local peritonitis. A ligature was placed round the appendix, and the distal part removed. There was a direct communication between the perforated appendix and the peritoneal cavity. He made a perfect recovery. Case 3: A man aged twenty was admitted on Jan. 3rd, 1892. Early on that day he had been seized with an acute pain, at first referred to the umbilicus, but ultimately settling down in the region of the vermiform appendix. Vomiting began two days later, and the bowels were so loose that he was sent into the hospital with a diagnosis of typhoid fever. He was

evidently suffering from peritonitis, for the abdomen was swollen, especially on the right side. It was very tender on pressure, and some tumefaction could be made out in that region. Mr. Silcock was called upon to operate, and made an incision two inches long over the right linea semilunaris. When the peritoneum was opened the cæcum came into view with a deeply congested piece of omentum adherent to it. This piece was taken away, upon which some pus escaped, but the appendix could not be seen. By careful search, however, it was discovered behind the cæcum and closely adherent to the parts around. The appendix was then seen to be ruptured in two places, and it was accordingly ligatured and removed, and the man made a good recovery. Case 4: A man aged seventeen or eighteen was admitted on Feb. 5th, 1892. Three days previously, while waiting at table, he had been suddenly seized with a sharp pain in the abdomen, followed by vomiting. There was a distinct swelling above the middle of Poupart's ligament on the right side, which was painful and very tender. A deep-seated, tense swelling was made out by careful manipulation. The same evening Mr. Page operated, and immediately the peritoneum was opened there was a flow of pus with a strong fæcal odour. The appendix was felt in the neighbourhood of the wound, but was so firmly adherent to the parts around that it was impossible to remove it or even to ascertain whether there was a perforation or not. Beyond it the abscess was cut off from the general peritoneal cavity by strong adhesions. The abscess was therefore washed out, a drainage-tube inserted, and the wound closed, and since that time the progress of the patient had been perfectly satisfactory. On the fifth day a small concretion came out of the wound the size of a grain of wheat. Dr. Lees pointed out that all these cases were essentially of the same nature, and it was curious to remark that they all occurred in persons of the same sex and at about the same age. He asked what explanation could be given of this fact. The cases showed that perforation of the appendix did not necessarily give rise to collapse, and the symptoms might be so mild as not to suggest the necessity for an operation.

Mr. PAGE recorded a case of Appendicitis where operation and removal of the Appendix were performed after the symptoms had lasted without intermission for twelve weeks. There was a large swelling in the iliac fossa, the thigh was acutely flexed, and the man was extremely ill. The abdomen was opened by incision as for iliac ligature, and the appendix, swollen and rigidly distended, was found with much difficulty embedded in a mass of adherent omentum. It was removed a quarter of an inch from the cæcum after the application of a proximal ligature. No fluctuation being felt in the iliac subperitoneal swelling, it was not opened, but a few days after the wound had healed by first intention pus began to flow from the track of the drainage-tube. For many weeks there was profuse burrowing suppuration, and the man's life was in great danger, but he was ultimately discharged well, and has been at work in good health since. The case was recorded as an instance of subperitoneal suppuration, and to illustrate the dangers which may arise in cases where there has not been perforation, and the cause of the appendicitis has been other than concretion. Although by no means suggesting that operation and removal of the appendix are to be carried out in all cases, for many no doubt recovered without surgical interference, the author nevertheless advocated early operation in cases where the symptoms were severe, and where a distinct iliac swelling was to be felt. There were no means of determining the precise nature or of predicting the course of any case, and the character and grade of the symptoms had to be the measure of the need for operation. The presence of active inflammation was certainly no bar to it in the early and acute stage. Cases of "relapsing" appendicitis, in which of course a period of quiescence would be chosen as the time of operation, are destined in all probability to become much less common than they were. The operation itself was probably much easier in the early stage than when the parts were firmly matted together by adhesions, and there was then also less risk to the patient than is entailed by delay and the chances of suppuration. In support of this he referred to cases operated on by McBurney, Stimson, and others in the early acute stage, and to a case of his own, to be described with Dr. Lees', where a perforated appendix was removed on the third day with the best possible results. It was desirable to examine all cases having extra-abdominal symptoms under an anæsthetic, for acute ill-

where the general condition and history were suggestive of appendicitis, the presence of a distinct iliac swelling would be a great help to the surgeon in deciding as to the propriety of operation.

Mr. PAGE next read a short account of a case of Relapsing Appendicitis. The history was that of a medical student who had had several attacks of appendicitis in the course of five years, and who was submitted to operation during a period of quiescence after an acute attack in October last. The abdomen was opened by an iliac incision, and the appendix was found sharply kinked, distended with mucus, and its walls much thickened, but there were no signs of concretion or ulceration. It was bound by adhesions to the cæcum throughout its whole length and to neighbouring coils of intestine by firm adhesions. An uninterrupted recovery followed the removal of the appendix, and the patient has remained free from discomfort up to the present time. It appeared that in this case there had been no other cause than kink to account for the attacks, and nothing short of an operation could possibly have freed the patient from the risk of their recurrence.

Mr. PAGET read notes of an unusual case of Sloughing of the Vermiform Appendix. The patient was a man of twenty-five, who had never had any sort of trouble with his bowels. An acute abscess formed round the cæcum, and when Mr. Paget opened it the vermiform appendix floated out with the pus. No foreign body or concretion was found at the operation or afterwards in the dressings. The appendix had sloughed off at its base; it had a pinhole perforation at its free end.

The PRESIDENT remarked that the term "typhlitis" appeared to have been replaced by "appendicitis," a word which might be American, but was certainly not English. He would undertake to say that it would not appear in the nomenclature of diseases now in course of compilation by the Royal College of Physicians nor in the Transactions of the Society. He urged that there must be many causes of tumefaction in the ileum unassociated with disease of the appendix, such, for example, as local inflammation of the caput coli, for which a purge was an effectual remedy. He inquired of Dr. Lees how he recognised "tenderness over the appendix." Many cases of the sort arose, he believed, from catarrh of the appendix, which might be determined by cold. From the condition of catarrh to the formation of concretions was but a step. Post mortem a very large number of appendices were found to contain concretions.—Mr. FREDERICK TREVES considered that the shortness of the mesentery to the appendix favoured its folding over and forming a band, and thus conducing to concretion formation. These concretions were neither foreign bodies nor fæcal matter, and as a matter of fact there were some cases in which, though there was some local induration, no concretion could be found. Many acute cases terminated favourably, and no general rule for operating could be laid down, each having to be considered on its own merits. He protested against the desperate hurry displayed in America in dealing with these cases. In one or two cases of his own in which operation had been refused the patients recovered without it. If operation became general, some lives might be saved, but certainly many patients would be subjected to operation without actual necessity. The results in recent cases showed the deaths to be about 1 in 50. Recovery had taken place after one or many attacks with almost complete obliteration of the appendix. After an attack of inflammation swelling at the site of the cæcum indicated persistent inflammation, and was an indication for operation. In others pain referred to the labium or scrotum or the bladder was important. He recommended that the incision should be made at what was known as McBurney's point, two inches internal to the anterior superior spine of the ileum, as it was safer to approach the appendix from outside and behind the cæcum. Ventral hernia was specially liable to ensue, but was less liable to follow when there was inflammation and a tube was used. As a further precaution he allowed a month to elapse before the patient was allowed to get up.—Dr. DYSON (Folkestone) mentioned two cases in which, after mild symptoms lasting three days, there were sudden collapse and death; both occurred in boys; there were sickness and tenderness, but no local swelling. He mentioned a similar case in the practice of a colleague. The advisability of operating was considered in all, but in two was negatived, and in the third the operation proved unsuccessful. Post mortem all had suppurative peritonitis

following perforation of the appendix with a concretion. He asked what guide there was to operation in such cases. From personal experience he was not disposed to agree with Mr. Page as to the necessity of operating in recurrent cases.—Mr. SILCOCK quoted a case in which he had operated recently. His incision was a little to the outer side of the linea semilunaris; he came upon the cæcum immediately.—Mr. BRUCE CLARKE reported the case of a woman who, after a blow on her side, was found after an interval of forty-eight hours to have a local spreading peritonitis. He determined to cut down without delay, adopting the incision referred to. The distended cæcum was readily found, but the appendix had sloughed off, and was found in the pelvis with a concretion in the lumen at the orifice. There was a large aperture in the colon, but recovery was complete. He thought there was more difficulty in deciding as to operation in chronic than in acute cases.—Dr. LEES said that in the cases reported there was no yielding of the scar. The concretions were often true calculi.—Mr. PAGE agreed as to the yielding of the scar after rapid healing. He congratulated the College of Physicians upon their intention of getting rid of the term "appendicitis," and he thought the term "caput coli" might follow.

EPIDEMIOLOGICAL SOCIETY.

A MEETING of this Society was held on Jan. 20th, Dr. E. O. Hopwood in the chair.

Brigade-Surgeon R. PRINGLE, M.D., read a paper in which he proposed to answer the question: What is efficient vaccination? It was, he maintained, such a system as conferred an immunity against small-pox equal to that acquired by a previous attack, which rendered revaccination superfluous, and the isolation of the sick in hospitals, except for their better treatment, needless. He disputed the value of the cicatrices as a test of success; for though a good cicatrix was positive evidence, so many accidents might interfere with the course of the successive stages in the development of the vesicles that after a normal incubation and papulation—which distinguished true vaccination from mere local irritation, and which were best observed from the third to the fifth days—had been passed through, a scar might be left from which nothing could be learned. He denied the existence of any direct ratio between the number of insertions and the degree of protection conferred; for when, as he had often seen in the Himalayas, some fifty men had been inoculated with the same variolous lymph by a single insertion over a space the size of a sixpence, and in the same place, the resulting eruption differed in every case, showing their dependence on individual susceptibilities under an identical mode of procedure. Dr. Pringle strenuously asserted the non-necessity of revaccination, which he had refused to practise during his thirty years of Indian service. He had been in consequence a marked man, but after his retirement he had his reward in the unwilling testimony borne to the success of the method by a hostile department when a special commission was appointed to inquire into the astonishing immunity from small-pox enjoyed by his districts at a time that the mortality in the North-west Provinces generally was awful—viz., in the epidemic of 1883–4. At first they were disposed to doubt the correctness of the returns, but they ended by ascribing the exemption from small-pox solely to the system of arm-to-arm vaccination he had carried on uninterruptedly for the twenty years from 1864. He quoted a remarkable passage from an ancient Hindu work, which showed that true vaccination was known and practised in India centuries before the birth of Jenner: "The small-pox produced *from the udder of the cow* will be of the same mild nature as the original disease. ..... the pock should be of a good colour, filled with a *clear* liquid, and surrounded by a circle of red. ..... There will be only a slight fever of one, two, or three days but no fear need be entertained of small-pox so long as life endures." Pasteur's attentuation of virus by successive cultures has been applied in India for hundreds of years to inoculations with variolous lymph, which the document in question directed to be taken from "the most favourable cases," and he had seen series of such selected inoculations in which there was no general eruption, and the local phenomena were scarcely distinguishable from those of vaccination.

Dr. WILLOUGHBY heartily agreed with Dr. Pringle as to the objectionable method of collecting the mixture of sanio-purulent and foreign matters supplied as calf lymph from the vaccine department of the Local Government Board, which he only used when it was demanded by parents, and he deplored the appalling amount of what passed as vaccination among general practitioners and the public, but when put to the test proved a delusion and a snare. But he could not concur in deprecating the practice of revaccination. Granting that it was needless, even if practicable, when the primary operation was really perfect, and that its successful performance was evidence of that having been imperfect, what stronger argument could one have in favour of continuing it until all vaccinators had attained to Dr. Pringle's ideal? One need but look to Germany, which up to the year 1874 was in much the same condition as England as regards vaccination, but had suffered heavily from the epidemic of small-pox in 1871–2, imported by French prisoners and carried by French refugees into other countries. The absolute exemption enjoyed by the population of Frankfurt at a time when the prisoners massed there were being decimated was rightly ascribed to the compulsory revaccination of every child at the end of its school life, which had been in force for more than a generation; and one of the first acts of the Imperial Parliament was to extend it to the whole empire. Since that, Germany had enjoyed an absolute immunity from epidemics, while the deaths in Prague had been 650, and in Vienna as many as 900 in a single year. Indeed, analyses of the cases reported throughout the empire showed that for some time past they had been exclusively among foreigners recently arrived, or the disease had been contracted from them by Germans who, born before 1860, had escaped the operation of the present law, and infants not yet vaccinated.

Dr. COPEMAN entirely agreed with Dr. Willoughby on the value and purpose of statements as to number and area. Some authoritative directions there must be; the public vaccinators followed the official regulations, while many private practitioners made one small insertion in order to indulge the prejudices of ignorant parents, and it was almost wholly among these unfortunate children that cases of post-vaccinal small-pox occurred. The analogy of all experimental inoculations proved that there was a ratio between the quantity of virus introduced and its effects, though not so absolute with living as with chemical poisons; and the area abraded approximately represented the probable absorption of lymph; but it was especially important in dealing with the children of the poor, whose arms were exposed to every conceivable form of septic infection, that the wounds should be so arranged as to dry and heal as early as possible.—Dr. PRINGLE agreed with Dr. Willoughby as to the superiority of lymph taken at the earliest possible period, at all events before the eighth day, but pointed out that the development of the vesicles depended on the temperature being more rapid in warm weather, and mostly so in children much exposed to the sun and air. In India, as was well known, vaccination could not be successfully performed in the hot season, though small-pox was then most rife, the progress of the vesicles being so unduly accelerated that the normal stages were not gone through.

HUNTERIAN SOCIETY.

A MEETING of the Hunterian Society was held at the London Institution on Jan. 27th, Dr. Stephen Mackenzie, President, in the chair.

Dr. GALLOWAY exhibited a case of Peculiar Disturbances of Sensation, with Muscular Wasting due to Syringomyelia. The details of this case will be found on another page.—Dr. JACKSON concurred in the diagnosis, and to him Dr. Galloway was indebted for permission to exhibit the case.—Dr. STEPHEN MACKENZIE thought the diagnosis was justified, and referred to other cases.—Mr. OPENSHAW asked how the unilateral nature of the symptoms could be explained.—Dr. TURNER remarked that he had seen one case on the post mortem table, being attracted to examine the cord by the extreme muscular wasting of the subject.—Dr. NEWTON PITT remarked on the unilateral distribution of the symptoms and their slow progress. He had a specimen of the joint affection due, on post-mortem examination, to a glioma of the cord, with distension of the canal.—Dr.

GLOVER LYON said he had a case under his care which he had at first taken to be progressive muscular atrophy in a young subject. He thought the present case aberrant in that the wasting was not so extreme as the complete loss of power might indicate.—Dr. GALLOWAY replied.

Dr. FRED. J SMITH showed a case of Symmetrical Local Asphyxia The patient, a woman aged forty-five, had noticed the condition for some seven or eight years. The case was of interest in that her father suffered in precisely the same way, indicating the constitutional nature of the malady.—Mr. SYMONDS mentioned a case of a similar nature which he had brought forward some years ago, in which scleroderma was associated with the vascular changes.—Dr. NEWTON PITT said that many conditions were included in local asphyxia, and said that if it were associated with hæmaturia, then quinine was of great value in treatment. He referred to a case of his own, in which syphilis and peripheral neuritis seemed to have an etiological connexion with the asphyxia.—Dr. S. MACKENZIE had seen many cases in which scleroderma was associated with local asphyxia. He had paid much attention to hæmoglobinuria, but had not been fortunate enough to find a single case with local asphyxia in addition.

Mr. C. J. SYMONDS showed a case of Trigeminal Neuralgia affecting the left infra-orbital branch of the nerve. The patient was a middle-aged man, for whom, after all other methods of treatment had been exhausted, Mr. Symonds had excised about one inch and a half of the infra-orbital nerve with immense relief to the patient.

Mr. OPENSHAW showed a case of Subdural Hæmorrhage; trephining; recovery. The patient, aged forty-two, fell and struck his head on Sept. 12th, 1890. For three days he complained only of severe head pain; on the fourth day he became delirious, and on the fifth fits commenced to appear. Mr. Openshaw saw him soon after the fits had begun. From the character of the fits and from the increasing depth of the oncoming coma, Mr. Openshaw was led to diagnose hæmorrhage within the cranial cavity causing pressure. He therefore immediately proceeded to operate. A flap was turned down from the skull, and as no signs of fracture were apparent, a trephine was applied. The dura mater bulged into the trephine hole; it was incised, and five ounces of blood-clot and serum were removed. The patient made an extremely rapid and satisfactory recovery, with the trephined piece of bone growing *in situ*.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

AN ordinary meeting of this Society was held on Jan. 8th, Mr. T. Gunton Alderton, Vice-President, in the chair.

Microscopical sections of Aural Polypi were exhibited by Mr. R. Lake, and pathological specimens by Mr. H. Percy Dunn.

Mr. EDMUND OWEN reported a fatal case of Unrecognised Cervical Caries in a servant girl, who was admitted under his care into St. Mary's Hospital on May 29th, 1891. Until that time she had been treated as an out-patient at a general hospital for "rheumatism." She had pains in every branch of the superficial cervical plexus and in the distribution of the great occipital nerve, and she was very ill. She was at once placed flat on her back, with a small cushion under her neck and big sand-bags on either side. The post-pharyngeal abscess was evacuated, and for a time the girl improved. Pains persisted, however, and she lay constantly with her hands up to her head. After lying about five months in the horizontal position and growing steadily weaker, Cheyne-Stokes respiration set in, and she died on Nov. 11th, 1891. A vertical section of the upper cervical vertebræ and the cord was exhibited, showing disappearance of the transverse atlo-axoid ligament and pressure of the odontoid process against the cord; also suppuration in the neighbourhood of the first four cervical nerves. Mr. Owen remarked on the too frequent mistaking of the neuralgiæ of central spinal disease for "rheumatism," and said that, if an error had to be made, far better was it to mistake rheumatism for spinal disease than spinal disease for rheumatism; for whilst the former error would be more inconvenient than harmful, the latter might not only prove an irremediable calamity, but might well be reckoned a stupid blunder. Discussion followed, in which Drs. W. Hill and Batten, and Messrs. Lunn and Keetley, took part, and Mr. Owen replied.

An ordinary meeting of this Society was held on Friday, Feb. 5th, Dr. Chas. Wells, President, in the chair.

Pathological specimens were shown by Mr. Percy Dunn, and Dr. Campbell Pope exhibited a case of Malignant Disease of Tonsil in a man aged forty.

Mr. HOWARD MARSH read a paper on Some Points in the Operative Treatment of Cancer of the Breast. He alluded first to the earliest age at which the disease is met with. Last year he had under his care an unmarried female, thirty years of age, with carcinoma of the left breast, which, in spite of operation, ran its fatal course in nine months. Similar cases at the ages of twenty-seven, twenty-three, and twenty-one had been recorded, and Sir J. Paget had told him that he had seen one in a girl aged nineteen. They were rare, and very quickly fatal. On the other hand, the author had lately operated on an old lady aged eighty-three, where the operation was successful. He thought the old bore operations favourably. He had also operated during the puerperium without any unfavourable symptoms. The author had been much impressed by the fact that recurrence of carcinoma of the breast seemed to be comparatively early in cases in which the wound healed by primary union, and to be postponed in cases in which the healing of the wound was delayed. He hardly knew how to make use of this observation, except to confirm the practice of freely removing the gland and skin, and laid special stress on the importance of dissecting away all the subglandular areolar tissue and pectoral fascia, as well as, of course, any glands that could be felt in the axilla The healing of the wound in modern surgery was so rapid that any carcinomatous elements left behind were uninjured, and would soon grow actively. When, however, the condition of the tissues was modified by free suppuration or other disturbing agency, the "cancer elements" that had escaped removal might apparently be destroyed.

Surgeon-Lieut.-Colonel HENDLEY, C.I.E., read a paper on the Indigenous Medical Systems of India, giving his experiences in the native States, in which he had served for more than twenty years. He reviewed the practices of the orthodox Baids (Hindu physicians) and Hakims (Mussulman practitioners), who have absolutely no knowledge of anatomy or physiology, and described the Yunani or Greek humoural system, which is that practised by the Hakims. Surgery was relegated to barbers and quacks, known as jhaarahs, in whose hands gangrene from tight bandaging and other atrocities were frequent. To these must be added Sathiyas or Couchers, who operated on the eye with filthy instruments with an alarming percentage of failure. Jain and Sikh priests practice empirically amongst their religious disciples; but the common people rely most on charms, superstitions, ceremonies, fulfilment of vows, and fervent worship at shrines. Quack medicines were sold everywhere, and legislation was imperatively necessary against the sale of secret remedies containing poisons. The confidence of the people was waning, and the European system making great strides. For example, in his own district, Jaipur, with a population of 3,000,000, his major operations in surgery had risen from ninety-seven to 236 per annum in his central hospital in ten years; while in that period in his dispensaries, which had increased from sixteen to twenty seven, upwards of 2000 major and 67,000 minor operations had been performed. Medically also the progress was as marked. Thus in 1890, 170,000 new cases had been seen, against 57,000 in 1881, and in all 1,100,000 new cases had been treated in ten years. In the prevention of disease much was due everywhere to improved sanitation, vaccination, regulation of fairs, &c., and the number of native medical men in private practice was also increasing. In conclusion the author spoke in highest terms of the advantages of the Indian Medical Service.

MANCHESTER PATHOLOGICAL SOCIETY.

THE fourth meeting this winter of the above Society was held at Owens College on Wednesday, Jan. 20th, T. C. Railton, M.D., M.R.C.P., President, in the chair.

Löffler's Diphtheria Bacillus.—Dr. ASHBY showed stained specimens of Löffler's Bacillus of Diphtheria, and also pure test-tube cultivations, which he had obtained through the

kindness of Dr. A. Baginsky of Berlin, and drew attention to the fact that the diagnosis of diphtheria by means of the detection of the bacillus in the membranous exudation had now begun to assume some practical shape, and there was a good prospect of the diagnosis being arrived at with certainty in doubtful cases without any great difficulty and with considerable rapidity. The most ready method was to detach a small piece of membrane and place it for five minutes in a 2 per cent. solution of boracic acid, then to draw the piece of membrane along the surface of sterilised blood serum in a test-tube, and maintain it at a temperature of 37° C. for twelve to twenty-four hours. At the end of this time, if the bacilli were present, characteristic small, white, rounded colonies were visible along the tract of inoculation. The bacilli were stained with a pure carbol-fuchsine, and examined with an oil immersion lens. To obtain a pure cultivation a second or third preparation must be made. The bacilli were thicker than the tubercle bacilli, mostly joined together in twos or more, and their ends were darker than the central portions. If an enlarged experience confirmed these observations, a notable advance had been made in the diagnosis of diphtheria.

Rupture of the Heart.—Dr. DIXON MANN exhibited the heart from a case in which rupture of the aorta immediately above the valves had taken place. The patient had three separate attacks of hæmorrhage into the pericardium, manifested by collapse, the last proving fatal. The aorta presented patches of atheroma.—Dr. R. T. WILLIAMSON also showed a specimen where an aneurysm of the left ventricle had burst into the pericardium. The patient had suffered from angina pectoris, and death occurred suddenly. The aneurysm was situated at the posterior surface of the left ventricle, about midway between apex and base. There was marked atheroma of the coronary arteries, but the cardiac muscle appeared normal, except at the seat of the aneurysm.

Tubercular Tumour of the Choroid.—Dr. HILL GRIFFITH showed sections and drawings of a Tubercular Tumour of the Choroid which had burst through the outer side of the globe and formed a prominence the size of a filbert covered by the thinned sclerotic, the rest of the eye being filled with stratified blood-clot. There was total separation of the retina, and the sight was entirely lost. The patient was a boy aged two years, under the care of Dr. Glascott; the eye had been inflamed six weeks, and the bulging had been present one week. Microscopically, numerous caseating centres were found with giant cells and reticulum; no examination for bacilli was made.

Micro-Photographs.—Dr. Harris showed with the aid of the limelight a very beautiful series of micro-photographs, illustrative of the more common diseases of the lungs.

Dr. Railton, Dr. Kelynack, Mr. Roberts, and Mr. Westmacott showed card specimens.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

A MEETING of the Section of Anatomy and Physiology was held on Jan. 15th, Dr. Brooks in the chair.

Exhibits.—1. Professor FRASER exhibited a beautiful collection of photographic enlargements of serial sections of embryos and of brains. He explained how they were made, and pointed out the great advantages of using this method of reproducing such sections as contrasted with old methods of copying with the camera lucida.—The CHAIRMAN complimented Professor Fraser on his work, and suggested the advisability of supplying with such reproductions line tracings, which would bring the important point of the sections more clearly before the untrained eye.—Professor FRASER in reply, agreed with the Chairman, and explained how such tracings might be simply and quickly produced with the aid of photography.—2. Professor BIRMINGHAM exhibited a specimen in which the transverse ligament of the atlas was ossified, except at the extremities, which still remained fibrous at the attachments to the bone. The odontoid process could be rotated freely within its ring.—The CHAIRMAN asked some questions about the specimen, to which Professor Birmingham replied.

Papers.—1. Dr. ROBERT H. WOODS read a paper on a few applications of a physical theorem to membranes in the human body in a state of tension. The theorem was that if P be the pressure of fluid contained in a membrane curved circularly in two directions at right angles to one another, and if r_1 and r, the two radii of curvatures, and T the tension at a given point,

$$\text{then } P \propto T \left(\frac{1}{r_1} + \frac{1}{r}\right).$$

This theorem, when applied to the heart, shows that the tension in the walls is not the same for different points on the heart wall, nor can it be constant for the same point in different stages of contraction, on account of the variation in the radii of curvature, but will be greater according as the curvature is more gradual and the heart more dilated. The organ, then, will have to make a greater effort at the beginning than towards the end of systole. But the heart wall is thinnest when most dilated; hence we have the two factors contributing towards the difficulty of commencing systole. The paper went on to show that this difficulty is, in part at least, got over by the columnæ carneæ and musculi papillares which cross the cavity of the heart, and thus act more directly on its wall, as well as economising space. An example was taken from the pathological condition known as prostatic bladder. The ridging on the interior of the bladder was an attempt to form columnæ carneæ of its own for the purpose of raising the pressure of the urine with the view of overcoming the resistance to its outflow. The same theorem, when applied to the uterus, explains the reason why an abnormally large collection of liquor amnii renders the organ almost powerless in expelling the fœtus, and also explains why letting a quantity of liquor amnii escape facilitates its expulsion. The author exhibited some specimens of hearts hardened under moderate interventricular pressure, and proved that if the thickness of the wall at different points be substituted for the tension (to which it may be taken as proportional), the formula

$$t \left(\frac{1}{r_1} + \frac{1}{r}\right)$$

is constant, or that the thickness of the heart at any point bore a definite relation to the curvature at that point. The want of a tendency to heal in varicose veins was also explained in a similar way, for the more dilated the vein the higher the tension in its walls, and the less availed any effort it could make at contracting to its normal size. The author also deduced that in an adult heart the pressure in the left ventricle is about six times and a half that of the right. There is reason to believe that the pressure in the left ventricle is a little over nine feet of water; that in the right would, on this assumption, be equal to a head of seventeen inches of water.—Professor FRASER doubted the applicability of such precise mathematical rules to structure in animal bodies. He would like to know if Dr. Woods' conclusions might be applied to all hearts.—Professor BIRMINGHAM said that in applying these conclusions to the heart of man, he would like to hear from Dr. Woods how he accounted for the distribution of the columnæ carneæ on the interventricular septum. In the left ventricle above, where the curvature is most open, the columnæ carneæ are almost absent, while they are numerous below, where the curve is reduced. On the right side of the septum, which is convex, the columns are much better developed. Professor Birmingham also referred to an old theory of the use of the columnæ carneæ—namely, that by whipping the blood they caused it to give off its gas more readily, as when flat soda-water is whipped up it gives a renewed discharge of gas. He much preferred Dr. Woods' scientific explanation.

THE LAHORE MEDICAL SCHOOL.—The Punjab Government has provisionally sanctioned an additional professor to the Lahore Medical School, pending reference to the Secretary of State for India.

THE WREXHAM INFIRMARY.—The annual report for 1891 (the fifty-ninth) shows that the good work of the charity is year by year being extended. The cots in the children's ward have all been nearly constantly occupied during the year. The continued generous support of the working classes in the district had appreciably relieved the committee from anxiety in the financial position of the charity. The sum of £400 had been invested in the course of the year, and the invested funds now amount to £2150. A nursing institute has been established in connexion with the infirmary, and the work, for nearly three months of its existence, had been successful and satisfactory.

Reviews and Notices of Books.

A Practical Treatise on the Diseases of the Ear. By D. B. ST. JOHN ROOSA, M.D., LL.D. Seventh Revised Edition. New York: William Wood and Co. 1891.

THE fact that this well-known work has reached its seventh edition is a sufficient proof of its excellence and general appreciation. The present edition is in some respects an improvement upon the others, for the author has been sensible enough to omit certain speculative and theoretical paragraphs upon the value of electricity as a diagnostic agent, which he now frankly confesses have not sufficient basis to be of practical utility.

The book opens with a learned, laborious, and interesting historical account of otology. Throughout the treatise the historical accounts of methods of treatment are well sustained, particularly those upon perforation of the mastoid process. The author truly remarks that there is no department of medicine in which so much has been written with so little exact knowledge. He certainly does not err in this respect. The book is valuable, inasmuch as the author has been at considerable pains to separate the wheat from the chaff. His conclusions are fearlessly stated, and gathered not so much from the writings of others as his own large experience. Any surgeon carefully reading this work will be materially aided in discriminating between curable and hopeless diseases. Aural surgery largely suffers from treatment directed to incurable cases. This the author of this book does not hesitate to point out; indeed, he plainly states that chronic proliferous catarrh is an incurable affection. He also gives us a plain opinion on the value of operations upon the tympanic membrane and ossicles in non-suppurative affections of the middle ear, and plainly hints at their experimental nature and generally disappointing results. Dr. Roosa speaks in condemnation of operations upon the nose in cases of deafness, and he shares in the opinion of some others that those who now enthusiastically adopt and advise these operations will in time relinquish them. Another excellent feature of this book is the abundance of well-selected illustrative cases, which greatly enhance the clearness and clinical value of the descriptions of varieties of disease. The work is thus far from being an elementary one; yet it may well be studied even by a beginner. Aiming as it does at being a very complete treatise, it is to be regretted that here and there omissions occur upon which an author of this note should be expected to give us in detail the value of his undoubted great experience. The important and complicated subject of "malingering" deafness is very shortly dismissed, and "hysterical" affections, often most difficult to detect and deal with in practice, do not receive the notice they deserve. In the description of the affections of the external ear there is no notice of lupus erythematosus or of Raynaud's disease. Again, in the article dealing with the cerebral complications of suppurative middle-ear disease, we think the symptoms of cerebral abscess should have been more fully discussed, with the operations for its relief. In connexion with this it may also be urged that the author hardly sufficiently recognises the extent and value of the work that has been done on this subject on our side of the Atlantic.

The chapter on Deaf-mutism is a good one, and the extensive tables given of this affection are most interesting and important. We think, in regard to this part of the subject, that more attention might have been devoted to the description of the methods to be employed for estimating the amount of hearing in children.

The book is illustrated by 140 woodcuts. These are generally well executed. Taking a general estimate of this book, it may safely be pronounced to be one of the best treatises on the known diseases of the ear in the English language. As such it will be of great value to the student and the practitioner.

The Principles of Chemistry. By D. MENDELÉEFF. Translated from the Russian (Fifth Edition) by GEORGE KAMENSKY, A.R.S.M., of the Imperial Mint of St. Petersburg. Edited by A. J. GREENAWAY, F.I.C., Sub-editor of the Journal of the Chemical Society. In Two Volumes. London: Longmans, Green, and Co. 1891.

CHEMICAL science probably received no greater impetus than when the law of the periodicity of the elements was firmly established about the year 1870. Chemists do not hesitate to ascribe to the Russian chemist, Mendeléeff, whose painstaking and accurate observations have since excited universal admiration, the credit of elaborating and developing this law to such a pitch of perfection as to enable him, with his clear and characteristic foresight, to foretell not only the existence, but also the properties of unknown elements. But the germ or essence of the law was beyond cavil contained in a paper on the Law of Octaves communicated to the Chemical Society in 1866 by our own countryman and colleague, J. A. R. Newlands. With this communication Mendeléeff confesses he was not acquainted, although in the work under notice he rather frankly refers to Roscoe, De Boisbaudran, Nillson, Winkler, Brauner, Carnelly, Thorpe, and others as the true founders of the law (the further development of which, he says, still awaits fresh workers), inasmuch as they verified the adaptability of the periodic law to chemical reality. Putting quibbling on one side, we may accept that the conception of the law of octaves or the periodic functions of the elements is due to Newlands, and later also to Mendeléeff; but to the latter chemist we owe the development of the law, so that it now shares an importance equal to that of the law of gravitation itself. In short, Newlands might be called the discoverer and Mendeléeff the master of the periodic law.

Messrs. Kamensky, of the Imperial Mint, St. Petersburg, and A. J. Greenaway have done well to translate the eminent *savant's* work, and English students may now read the story of the principles of chemistry just as they are set forth and charmingly taught by the illustrious Russian philosopher. The work possesses more than ordinary interest; it marks an important epoch in the history of chemical science, for it was in preparing for the first edition of this book that the author was led to those considerations which resulted in the discovery of the periodic law in its present form. In regard to the treatment of the subject, it would amount to presumption to suppose that there would be anything likely to meet with our disapproval. Suffice it to say that the way he has dealt with the subject betrays the true spirit of the philosopher. He expresses the belief, for example, that the time has come to turn aside from visionary contemplation, from platonic aspirations, and from classical verbosity, and to enter the regions of actual labour for the common weal, and to prove that the study of science is not only an excellent education for youth, but that it instils the virtues of labour and truth, and creates solid national wealth, material and mental, which without it would be unattainable. Science, which deals with the infinite, is itself without bounds. It is gratifying to find that one so eminent as Mendeléeff joins issue with those, and ourselves amongst the number, who boldly denounce the pernicious system of teaching on strictly examination lines and for the mere purposes of cram. A schoolboy of average intelligence would read through the chapters in large type with interest and profit, while the advanced student will find in the footnotes in small type details involving the discussion of theory, and details of a historical as well as technical character. The beginner is not suddenly

introduced to a consideration of hard and new facts concerning a substance he never heard of, but to an account of the simple and familiar substance, water and its compounds. Then follow eight chapters on the non-metallic elements and their relations. In this dissertation all mention of the halogens is omitted until in the tenth chapter sodium chloride, so familiar to everybody as common table salt, is described. Then come the chlorine group, or the halogens. Salt treated of in the chapter alluded to involves of course a reference to the metal sodium to which the attention of the reader is more fully drawn in Chapter 12, an account of spectrum analysis being opportunely included. The metals, potassium, lithium, &c., follow, in natural sequence. Taking advantage of the student's knowledge so far, he is next introduced in the closing chapter (14) of the first volume to a consideration of the valency and specific heats of the metals; magnesium, calcium, and barium being also dealt with in this section. The first chapter in the second volume is devoted to the subject upon which no greater authority than Mendeléeff can speak—that is, the grouping of the elements and the periodic law. This, to us at any rate, is the most interesting portion of the work, and the footnotes, which enter into historical details of interest, and more fully into theoretical considerations, are here assigned a greater space than the text. The possibility of foretelling the properties of still unknown elements, the logical way Mendeléeff predicted the properties of a new element, and the subsequent discovery of germanium by C. Winkler, the actual properties of which were found to entirely correspond with those which were thus foretold, form a fascinating story. Interesting is it also to hear that when in 1871 Mendeléeff wrote a paper on the application of the periodic law to the determination of the properties of yet undiscovered elements, he did not think he should live to see the verification of this consequence of the law; but such was to be the case. Three elements were described—ekaboron, ekaaluminium, and ekasilicon, and after the lapse of twenty years he had the indescribable pleasure of seeing them discovered and named after those three countries where the rare mineral containing them are found, and where they were discovered—Gallia, Scandinavia, and Germany. We are tempted to linger over and discuss many details of an equally absorbing interest, but space does not permit us to recount anything like all the brilliant results which followed upon this law, and we must refer our readers to the scholarly papers contained in the appendix. The first is a lecture delivered at the Royal Institution on May 31st, 1889, and bears the title of "An Attempt to Apply to Chemistry one of the Principles of Newton's Natural Philosophy." The second is the substance of the Faraday lecture delivered before the Fellows of the Chemical Society at the Royal Institution on June 4th, 1889. It is entitled "The Periodic Law of the Chemical Elements." As illustrating the marvellous exactness with which he was able to foretell new elements consequent on a knowledge of the law, we cannot resist quoting a few lines from this memoir. "I foresee," he said, "some more new elements, but not with the same certitude as before. I shall give one example, and yet I do not see it quite distinctly. In the series which contains mercury, lead, and bismuth we can guess the existence of an element analogous to tellurium which we can describe as di-tellurium, Dt having an atomic weight of 212, and the property of forming the oxide $Dt O_3$. If this element really exists it ought in the free state to be an easily fusible, crystalline, non-volatile metal of a grey colour, having a density of about 9·3, capable of giving a dioxide, $Dt O_2$ equally endowed with feeble acid and basic properties. The compounds of the new metal will be easily reduced, and it will form characteristic definite alloys with other metals."

Following on the discussion of the grouping of the elements and the periodic law the nine remaining chapters deal with the rest of the elements classified according to its requirements. No pains have been spared to bring the subject matter into harmony with the results of modern research, and a description of the industrial processes of recent introduction has not been overlooked. In exemplification of this, we find the research of Moissan on fluorine referred to on page 483, and a description of Chance's process for the recovery of sulphur from alkali waste on page 197.

English-speaking students of chemical science owe a real debt of gratitude to the translators of this volume, inasmuch as in giving as far as possible a literal rendering of the original work, so that the spirit of the master, as it were, may be caught, they have afforded them the opportunity of reading and studying one of the most entertaining and instructive accounts of the progress of chemical science with which we are acquainted, and to review which has afforded us much pleasure and reward.

On Harelip and Cleft Palate. By WILLIAM ROSE, M.B., B.S. Lond., F.R.C.S., Professor of Surgery in King's College, London, and Surgeon to King's College Hospital, &c. London: H. K. Lewis. 1891.

MR. WILLIAM ROSE enjoyed special advantages in his early professional life as an assistant of the late Sir William Fergusson, and it is not to be wondered at that he should have devoted special attention to a branch of surgery in which his master so greatly excelled. Having had considerable experience in the operative treatment of harelip and cleft palate, he has done well to lay the fruits of it before the profession; and no exception whatever is to be taken to the form in which it is done. The book is thoroughly practical, candid, and unbiased, and does equal credit to the author's professional skill and literary ability. Mr. Rose's colleague, Mr. Carless, has contributed the chapter on the development of the upper jaw, palate, nose, and lip, which affords an admirable account of this interesting section of human embryology.

Manual for the Physiological Laboratory. By V. D. HARRIS, M.D. Lond., and D'ARCY POWER, M.B. Oxon. London: Baillière, Tindall, and Cox.

PRACTICAL work in all the branches of medicine has during the last few years received much attention in training schools, and a large share of the examination for the diplomas and the various qualifying bodies consists not so much in eliciting what the candidate can say, but more and more the crucial test is coming to be what he can do. In the domain of physiology, which forms the basis of all rational medicine, the value of practical knowledge and practical methods can scarcely be over-estimated, and this volume is so constructed that its use in the laboratory cannot fail to greatly aid the student in acquiring both. Familiarity with the microscope is essential. In this volume it is described and illustrated in a full and efficient manner. Histological methods, including a description of the various microtomes, methods of staining, mounting, and injecting specimens, are given in detail. The second part of the book is devoted to practical methods of viewing and preparing for consideration and judgment the various tissues of the body, and the last portion—Practical Physiology, strictly so-called—has been adapted to meet the requirements of senior students preparing for the higher examinations in physiology. Coming from the hands of such practical physiologists as are the authors, the volume before us cannot but put the reader into possession of the most modern style of inquiry into physical functions, and the student cannot fail to derive great assistance in his laboratory work from an attentive perusal of its pages.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 20, 1892.

FEW people doubt that the water-supply of London will before long be taken over by the London County Council. Extravagant fears, and hopes perhaps equally extravagant, are felt in regard to the proposed change. As to the fears they are certainly chimerical. In England we do not annex other people's property without compensation, and it is certain that if the London companies part with their valuable rights they will do so on equitable terms. Probably they will receive more than the actual market value of their shares. No scheme that can be adopted by an English Parliament will injure the value of the property which to so many people is a matter almost of life or death. On the other hand, the advantages to be gained by the public in such a conversion, although upon the whole very evident, are not without some elements of risk. For the assumption of all water rights by London would involve very considerable expenditure, and if a London County Council pledged to penurious economy were elected, the work might be insufficiently done, while the benefit of the great experience gained by the present private companies might be lost. Upon the whole, it appears highly probable that London would gain, as the great towns of the North have gained, by a municipal management of the water-supply.

We are anxious to do full justice to the London water companies. They were not to blame for the bad supply which, even in quite recent times, led to or fostered epidemics of cholera. Of late years they have done their best to improve the supply. Doubtless their action was stimulated partly by the action of Parliament, and still more by the growing force of public opinion and public knowledge. Companies which pay dividends cannot be expected to be anxious to incur unnecessary expense; but the London water companies are entitled to full credit, not only for an earnest endeavour to meet the demands exacted by the progress of sanitary science, but also for skill and energy in meeting them. London water is a very different thing from what it was when, in the not far past, it was our duty to denounce it, not only as an incessant danger to public health, but also as a convicted and notorious offender against it. Some of the older among our readers may remember the time when we had to record not only constant turbidity in the water-supply, but also the frequent presence of living organisms of all kinds. The stoppage of a water-pipe by an eel which had grown and fattened in it was not an infrequent thing. The compulsory removal of the intake from the Thames to places above Hampton effected a great improvement, while the more careful supervision of the river, and, above all, more efficient filtration, were hardly inferior in their beneficial effects. We admit that formerly we, together with most sanitary authorities, underrated, as many are now inclined to trust unduly to, the value of filtration. It is now fully recognised that careful filtration, even sand filtration, diminishes in a most important degree the danger of zymotic contamination. Filtration is now carried out with great care, and the water supplied to London seldom shows any urbidity perceptible to the eye. Even now further improvement might probably be effected, and it is a matter of wonder to us that powdered gas coke, the value of which as a filtering agent has been so conclusively proved by Professor PERCY FRANKLAND, has not been employed. Possibly it has been tried on a sufficiently large scale, and has been found unsuitable; but if so, no record of such experiments has reached us. On the other hand, it must not be forgotten that in the classic researches of Professor BURDON SANDERSON and Dr. E. FRANKLAND on the cholera virus it was shown that the rice-water discharges of cholera, enormously diluted with water and carefully filtered through Swedish paper, were still capable of communicating the disease to mice, and that there are many other examples on record of the futility of even apparently perfect filtration.

It is well known that the water-supply of London is at the present time derived from the following sources: the Thames above Hampton, the New River, the Lea, and deep wells. Of these the Thames is the most important, and for our present purpose the others may be ignored. Now while recognising to the utmost the value of modern improvements, we find ourselves unable to abandon our old belief that the Thames affords a most unsatisfactory water-supply. The Thames drains a large and highly populous area, and pollutions of all kinds pass inevitably into it. Every storm of rain carries down in muddy streams the washings of towns, villages, manured fields, and pigstyes. In spite of all care human sewage certainly finds its way into the stream even at distances not far above the intakes of the great companies. At the mouth of the Wey, close to Shepperton, a cluster of houses with cesspools certainly pollute the water, for the cesspools fill during flood time and empty as the water recedes. Such at least was the state of things at the time of our last inspection, and we have no reason to suppose that any change has been effected. This, at all times unpleasant, might evidently become a source of urgent danger if a single case of cholera or choleraic diarrhœa occurred in one of the cottages. In the same way barges and even house-boats, in spite of the prohibitions of the Thames Conservancy, might evidently and at any time communicate some deadly pollution to the water-supply. London would then be protected only by the filters, and surely nobody would drink with comfort water which, having received the cholera virus, had been purified solely by passage through sand. As to other pollutions we have ourselves seen the putrid bodies of dead dogs floating in the river within half a mile above the intakes of the companies.

One other argument in regard to the present London water-supply must be noticed, although it has lately been stated by Sir T. FARRER with very great force. The present water-supply of London will before many years have passed be insufficient. After seasons of drought the water companies draw off from the Thames and the Lea almost if not quite as much as could possibly be permitted. Any considerable extension of the intake would either be impossible or would leave the river an empty and muddy ditch. If, therefore, the water-supply of London remains in the hands

of the present companies they will have ere long to face the necessity for some great extension of their supply. It is evident that if the extension of London continues at its present rate the existing supply will be found inadequate ere long in regard to quantity as well as quality.

Twenty-five years ago or thereabouts a number of proposals for a new supply of water to London were discussed; and on a future occasion we may find it desirable to review these schemes, some of which have become impossible, while others are still worthy of attention. The subject has suddenly acquired a new interest, as the Government has promised yet another Royal Commission of inquiry. Although our faith in Royal Commissions has been rudely shaken of late years, not from their inefficiency, but from the systematic way in which their conclusions have been ignored, it must be admitted that before action is taken in a matter of such magnitude the latest results of scientific investigation should be considered.

IN the January number of *The Climatologist* (Philadelphia) there appears a paper by one of the editors, Dr. J. M. KEATING of Colorado, on "The Rest Cure in Phthisis." The main contention of the writer is that in physical rest under good hygienic conditions, and combined with super-alimentation and tonic measures generally, we have one of the best means of re-establishing and maintaining nutrition in phthisical patients. The treatment of phthisis has in the main followed one of two directions—the effort to find some agent capable of arresting the infective and destructive processes in operation, and the adoption of measures of which the great aim is the promotion of nutrition. The former of these, however well conceived *a priori*, has, as we know from bitter experience, been a failure in practice; whereas the latter, although obviously more or less of a *pis aller*, has always achieved a considerable and encouraging amount of success. We endeavour to promote nutrition by careful feeding, tonics, a well-ordered life, change of air, climate, &c. Dr. KEATING'S paper raises the very apt and important question whether, in addition to these measures, regarding the utility of which we are all agreed, we should advise rest or activity. The prevalent idea amongst practical men is, we take it, that if a case of phthisis be far advanced and much debility and emaciation be present, rest is indicated not as holding out any hope of cure, but simply because effort is difficult and painful to the patient and achieves no good purpose; whereas in early cases of phthisis, with nutrition still fairly well maintained and a considerable amount of physical vigour still remaining, exercise is believed to be desirable as tending to promote appetite, digestion, and nutrition, and to help the expansion of the affected lung. Exercise, further, involves usually life in the fresh air, and removal more or less from the vitiated atmosphere and the habits of invalidism of the sick-room. Hence, in the opinion of most authorities, are most probably explained the good effects which so often follow a resort to high altitudes, and the adoption of the hardy and vigorous modes of life for which the mountain sanatoria offer at least considerable inducements.

While the above ideas are more or less the accepted dicta and the working rules of most physicians who have given great attention to the study of phthisis, yet we are all alive to the fact that much injury is sometimes done by the unguarded recommendation of active habits in unsuitable cases, and the reminder that in certain instances rest rather than activity is indicated is not inopportune. We should be glad of any evidence that would help us to differentiate the two classes of case, as the distinction is without doubt a real and practical one. It would be a very great misfortune if from one extreme we were to pass to the other, and accept the doctrine that rest, inactivity, and invalidism were the points to be aimed at in phthisis—a doctrine that had a long trial, and of which the results were most disastrous. Dr. KEATING quotes Dr. WEIR MITCHELL, who speaks as follows regarding the application to phthisis of his well-known methods of super-alimentation, massage, and electricity, which have achieved such good results in cases of nervous breakdown:—"I have ventured, without much hope, to treat three cases of phthisis in the same manner. There are cases of this nature in which exercise wearies; there are others which we cannot, for various reasons, send away to more genial climates; and in such instances we are driven to stand by, and, with no more hope than oil and tonics give, merely watch the slow decline of our patients. I believe that sometimes, and especially in the very earliest stages of consumption, my treatment will save a small percentage of such people; but as yet I only venture to make the suggestion, and wish distinctly to state that my experience in this form of its usefulness is limited." These are cautious words, and do not offer any very substantial basis of opinion. Dr. KEATING goes somewhat further, and mentions several cases in which "massage, electricity, Swedish movements, respiratory gymnastics, cold surface sponging, milk diet, and sensible rest" seem to have achieved a cure. He teaches that "for the unfortunate many who are obliged to antagonise soil and climate influences, who are obliged to withstand dampness, want of sunshine, and great changes, a 'rest-cure' treatment should have added to it the systematic inhalation of compressed oxygenated air, possibly medicated, and also a thorough course of pulmonary gymnastics," and to these measures in combination he looks with considerable confidence.

It is notable that Dr. KEATING, while strongly advocating physical rest, no less emphatically urges the importance of those measures which tend to exercise the lungs. We all recognise that one of the chief, perhaps the very chief, reason for advising active habits is that such habits bring the lungs into fuller play, promote the circulation of pure air in the pulmonary alveoli, and tend to expand the contracted and cicatrised lung. It is a fair question how far these ends might be achieved by pulmonary gymnastics as distinct from general physical exercise. We suspect much difficulty will be met in carrying out pulmonary gymnastics with the requisite regularity and thoroughness. We have also to remember that regular physical exercise involves the very important points of fresh air and mental distraction, and that these cannot be ignored with impunity.

Dr. HERMANN WEBER some years ago advocated a plan which he had found useful in cases of active and pyrexial phthisis. This was the erection of hammocks in sheltered

and sunny positions, the patient to spend as nearly as possible the entire day in them, fresh air being thus secured in combination with rest. The obvious difficulty in the way of this suggestion is the question of climate, such a measure being clearly impracticable unless warmth and sunshine can be reasonably expected.

It is probable that the "rest-cure in phthisis," if ever extensively employed, will be found to involve special difficulties of its own. We have the awkward fact to face that most phthisical patients at some stage of their malady become dyspeptic, and that super-alimentation and rest will probably be found impracticable in such cases. Then, experience seems to prove that our most valuable drug or food in phthisis—viz., cod-liver oil—is rarely well tolerated unless the patient be able to indulge in regular physical exercise. Still, we need a reminder sometimes that the off-hand recommendation so often made to patients suffering from phthisis of "plenty of exercise and fresh air" is a very dangerous and unscientific piece of advice and that we need carefully to distinguish between those cases in which exercise and activity seem to offer the best hope and those in which rest fulfils, at all events, a very useful function.

ALTHOUGH the report from the Committee of Delegates of the two Royal Colleges on the scheme for a five years' curriculum was received and adopted by the two Colleges in the second week of January, we understand that the synopses indicating the ranges of subjects in the various examinations will not be issued until some time in March. Meanwhile it may not be inopportune to consider the position assigned to one of the subjects which has given, and, indeed, seems still to be giving, the greatest trouble—viz., materia medica. The chief cause of difficulty appears to be the desire to treat this subject as one which might, and perhaps should, be in part studied before registration, and before the commencement of the ordinary studies at a medical school. This notion, although it probably had its origin in the old days of pupilage, still appears to present certain attractions to those who think that a great deal of useful knowledge may be picked up in the desultory instruction likely to be given by a member of the Pharmaceutical Society, or in the ordinary routine of a public hospital, infirmary, or dispensary, or of general practice. During many years this attempt to crowd in some kind of information before registration has been upon its trial at the examinations of the Conjoint Board, and the results, so far as medical education is concerned, have been disastrous. Students have been encouraged to present themselves for examination in the medicinal actions of drugs before they could possibly be familiar with the terminology of physiology or therapeutics, and the outcome has been most discouraging to all concerned. The percentage of rejections in this subject has been wholly disproportionate to its importance, and although the examiners in materia medica have thus practically indicated that an impossibility was being attempted, and indeed have, we believe, made representations to that effect, no change was sanctioned until a protest came from the examiners in medicine against the ignorance of students presenting themselves at the final examination. It has been asserted that many aspirants for qualification have been found lamentably at fault when asked to prescribe for the simplest maladies, and that poisonous drugs have been ordered in doses which betrayed complete ignorance of toxic properties. The complaint having reached a climax when students and examiners were equally dissatisfied, it has at last been resolved to attempt something by way of improvement. In the new scheme it is set forth that before the third examination students shall have attended a course of lectures on pharmacology and therapeutics during not less than three months, and for the purposes of examination the subject of materia medica has been subdivided into practical pharmacy, pharmacology, and therapeutics. The first division, practical pharmacy, may be taken at the candidate's option (or peril) at the first or the third examination, and as this branch may be studied almost anywhere it scarcely seems worth very much consideration until the issue of the synopsis of examination. With regard to pharmacology and therapeutics, however, the case is different. In the published regulations they appear under the heading of medicine, and they are associated under that heading with medical anatomy, pathology, forensic medicine, and public health. According to these regulations pharmacology appears to be defined as being equivalent to the "physiological action of drugs." This definition is, doubtless, somewhat new and somewhat arbitrary, but there can be little real objection to it if this subject is not divorced from that of therapeutics. Taken together, the terms may be regarded as embracing a knowledge of the actions of drugs both upon the healthy body and in disease, and thus there could be no chance of misunderstanding as to their scope. It is rumoured, however, that it is possible, or even probable, that pharmacology and therapeutics will be separated, the latter subject being reserved for the examiners in medicine. The advantage of such separation is not obvious, since if they desire to satisfy themselves about the student's knowledge of prescribing, of doses, or of the appropriate remedies to be employed in any given case, it was always, and would continue to be, within the power of the examiners in medicine to test this knowledge either in the paper, or, better still, during the practical examination. On the other hand, the separation of therapeutics from pharmacology would probably lead to confusion and discussion. If pharmacology means physiological action only, examiners in this subject would be precluded from touching upon many of the most important actions of some of the chief drugs, and the association of ideas between the physiological and the therapeutic action would be lost. It has often been asserted that the basis of rational therapeutics lies in the application of physiological knowledge, but it has never been considered that pharmacology or the physiological action of drugs was capable of standing alone. If this subject is to be treated in a separate paper, it is probable that it will soon attain very undesirable prominence; while therapeutics, if taken as a small part of a composite subject, will be proportionately belittled. Both for purposes of study and for purposes of examination pharmacology and therapeutics should be linked together. This has been recognised so far as the regulations affecting the teaching by lectures are concerned; it will be much to be regretted if the rumours

of separation of these subjects eventually prove to be well founded, and thus the proper balance is upset in the final arrangement of what should be mere matters of detail.

Annotations.

"Ne quid nimis."

THE GRESHAM UNIVERSITY.

THE Committee of the Privy Council has consented to the change of name of the proposed Teaching University, and the Draft Charter, with this alteration only, has been laid on the table of both Houses of Parliament. There will evidently be a considerable opposition to its passing through the House of Commons, as objections have been raised to several clauses by different bodies; but it is impossible for any changes to be made therein, as it must be passed or rejected *en bloc*. Most of the objections on the Arts side are urged against the collegiate training, which is the key-stone of the Charter, the objectors being in favour of recognising evening class instruction in its stead. The difficulty of securing adequate certificates of any proper course of study under such circumstances led to the abandoning of certificates altogether in Arts and Science in the University of London, and the same difficulty would probably arise in the case of the new University. Thus a second purely examining body in London would be created, and this with the disadvantage of being a merely local one. It is stated that out of the large number of persons attending the classes of the University Extension Society in London during the year 1890 only one completed the course, so that there is very little evidence of a continuous curriculum of study being followed by such students. The arguments for the Charter from the Arts' standpoint have been well put by the Bishop of London in a letter to the Lord Mayor expressing his gratitude to him and to the Gresham Grand Committee for uniting the London Teaching Colleges, King's and University, with the old Gresham foundation. Unfortunately, the Bishop of London, Sir John Lubbock, Lord Ripon, and others have altogether ignored the medical side of the scheme, and the question has thus been treated as if it were only one of amalgamating King's and University Colleges with Gresham College. We would point out that as the Royal Colleges of Physicians and Surgeons and the University of London have failed in passing their schemes, the success of the present movement alone offers a prospect of removing the disabilities under which London medical students are now placed. The objection of Victoria University to the proportion of the medical element being so large in the Council as fourteen, possibly sixteen, in forty, is very unfair to the medical teachers in London, who are probably quite 300 in number, and whose influence will doubtless be very great, but certainly not "paramount." The contention that such a Council will exert its influence to unduly lower the scientific training of the graduate is an unjust reflection on the London medical teachers, who will surely be as jealous of the reputation of the degrees conferred by them as are the teachers elsewhere. No safeguards against lowering the standard of degrees are inserted in the Charter of the Victoria University itself. If the Gresham degrees were unduly lowered, they would soon become worthless as marks of professional knowledge. A statement of the reasons why the medical schools of London should form a large part of the proposed Gresham University has been drawn up by the delegates of the various medical schools, and will shortly be made public, so that we hope that more attention will be given to the importance of the medical aspect of the question.

THE FOOT-AND-MOUTH DISEASE.

THE Government officials have evidently not succeeded in repelling the invasion of foot-and-mouth disease alluded to last week, for up to the present date there have been outbreaks in different parts of London and Kent, one of them as far distant as the Isle of Sheppey. There is much reason to fear a further extension, as the origin of some of these outbreaks is difficult to trace. It would almost appear as if the malady had obtained a foothold in London before the arrival of the incriminated Danish cattle, for the Government of Denmark has intimated that it is not present in that country; therefore the infection could not come from that quarter of Europe. Already the invasion has caused much inconvenience, hardship, and loss, and in view of the fact that there are now only four small countries from which live cattle can be safely obtained—Sweden, Norway, Spain, and Portugal—the question may well be asked why the importation of living beasts should be tolerated at all. The animals are generally subjected to much suffering in transit, and, considering that contagious disorders are so rife among them on the Continent, great risk is always incurred of having infection brought here with these importations, as in the present instance. It would be far better to depend upon dead meat from abroad than live stock importations. Should the malady become prevalent, then it must be remembered that the milk is infective, and prudence demands that, in localities where there is any chance of that fluid being derived from diseased cows, it ought to be boiled, especially if intended for young children.

FOG.

FOG has long been a subject ripe for legislation, and the reply given by the Marquis of Salisbury to Viscount Middleton in the House of Lords last week was, it must be admitted, somewhat disappointing. It contained no very distinct promise of any attempt being made out of the resources of science to grapple early with the difficulty. He agreed, however, that there were certain remedies which might be adopted if it were expedient to carry out a particularly drastic line of legislation. Considering that at the present time there are no fewer than 700,000 houses within the metropolitan area, in which no less than 40,000 tons of coal are being daily consumed, the remedy, if it is to be a remedy at all, must of necessity be a drastic one. This admitted, what form or shape is it to take? Coal for the present is, and probably will be for a long time to come, our chief source of fuel, and it is with this kind of fuel that we have to deal. The adoption of one particular kind of fuel — viz., anthracite, which is to all intents and purposes smokeless — has been suggested. But can this be carried out in practice, seeing that the yield of ordinary household and steam coal in our collieries far exceeds that of anthracite, while, as Lord Salisbury suggested, the price of that class of coal would be so enormously increased as to prevent its use for all ordinary purposes? It has been boldly proposed also to burn the coal in closed chambers, as in the retorts of our gas works, at a fixed point in or near the city, and so to supply the metropolis with gaseous, and hence smokeless, fuel. If any step may be characterised as drastic, surely this is one. Then there is the question of the enforced adoption of certain stoves and fireplaces, which by their construction shall ensure perfect combustion and the production of invisible or smokeless gaseous products. So long as coal is our common fuel, the remedy, it seems to us, must lie in the

general adoption of some such arrangement. We have always shown a lively and practical interest in this vitally important matter, because it is one which affects the health and well-being of a large proportion of the community. At the present moment we are engaged on a prolonged and exhaustive inquiry into the action of a new stove which is said to produce no smoke, although it is stated to burn the commonest kind of coal at an economical rate. We hope to lay before our readers the results of this inquiry in the course of a few weeks. In no case can it be supposed that scientific measures will prevent the inevitable formation of mist; but if London fog can be stripped of its colour which is coincident with its irritating character, and which is due to the presence of carbon particles, tarry matter and sulphur, then a vast improvement will have been accomplished, and a giant stride onward in hygienic science achieved. As we have pointed out more than once, even when coal is perfectly burnt or consumed, we still have to deal with the products of combustion of sulphur, which element occurs to the extent of from 1 to 2 per cent. in most kinds of coal. Carbon, hydrogen, sulphur, and nitrogen in coal, when completely burnt in air, produce carbonic acid (CO_2), watery vapour (H_2O), sulphurous and sulphuric acids (SO_2 and SO_3), and a trifling quantity of free nitrogen. Given, therefore, the complete consumption of the coal—that is to say, that no smoke or unburnt carbon is produced,—what is to be done with the combustion products of sulphur? and how will these products (SO_2 and SO_3) alter the character of the fog? We suggested in a leading article some time ago that probably lime or any of the alkalies placed at some point in the chimney could be used to absorb these acids, and those who claim to have secured the perfect combustion of coal by the adoption of a particularly constructed stove should be induced to put this simple suggestion into practice.

THE LEPROSY INVESTIGATION COMMITTEE.

THE fourth number of the Journal of the Leprosy Investigation Committee (Macmillan and Co.), which is issued under the auspices of the National Leprosy Fund, contains an account of the proceedings of the Committee up to the close of last year. It announces the approaching publication in India of the report of the Commission sent to that country in 1890, which will include an appendix containing the results of the laboratory work. Amongst the contributions to this number of the Journal are reports on leprosy in Russia from Dr. Hellat, who records the steps taken to control the disease in the Baltic provinces, and expresses himself strongly in support of its infectiousness, and the necessity for isolation as the sole means to check its spread. Dr. Fagerlund gives an account of leprosy in Finland; and there are two communications from Brazil—one from Consul-General Abbott, and the other from Dr. Azevedo Lima—describing the Leper Hospital at Rio and the condition of leprosy in the country. Dr. Lima says that leprosy has apparently increased in Brazil of late years, but there are no precise data on the point. At any rate, he thinks there must be more than 300 lepers scattered through Rio, many of whom come from the interior. Then follows an abstract of a paper by Dr. Julius Goldschmidt, giving a sketch of the disease in Madeira, where the hospital records show a notable diminution in its extent, there having been during the last fifteen years only one or two cases admitted annually. He estimates the total number of lepers at present in the island to be seventy, or six to 10,000 inhabitants. Although phthisis is not infrequently the cause of death in leprosy, yet a phthisical patient has never contracted the latter disease. Dr. Goldschmidt says that complete isolation of all lepers and their families is the only measure which can eradicate leprosy, and he urges also the inculcation on the healthy part of the population of sound principles of diet and hygiene to enable them the better to resist it. An important contribution to the question of vaccination in relation to leprosy is made by Drs. Beaven Rake and G. A. Buckmaster, founded on observations on vaccine lymph taken from lepers at the Almora Asylum. Forty cases were examined, and in not one were indubitable leprosy bacilli found in the lymph, although in two cases there were some "suspicious-looking rods." In one of these the vesicles were raised over tuberculated ears, and in the other over anæsthetic patches—localities which, they remark, are not likely to be selected for vaccination or for obtaining lymph to be used on healthy individuals. The question of the communicability of leprosy by vaccination is fully discussed in the forthcoming report of the Leprosy Commission. Meanwhile, as evidence of the slight risk of so transmitting the disease, these writers mention the very low proportion of lepers in India that have been vaccinated, the experience gained in Trinidad, the fact that they have never seen undoubted leprosy in any child under the age of six years, and the sole known case of alleged successful inoculation of leprosy—that of Arning in Hawaii—being open to the objection that leprosy is endemic in the Sandwich Islands, and that the disease has appeared in the relatives of the inoculated subject.

INFLUENZA.

THE Registrar-General's returns for the week ending Feb. 13th bear out the opinion that influenza and its associated high mortality are fast declining in this country. The death-rate in London has further declined from 30·6 to 24·6, which is precisely the same rate as obtained at Brighton, and which, moreover, is not far exceeded by any of the thirty-three great towns in the list. The deaths in the metropolis directly attributed to influenza fell to 183, and the cases in which influenza was noted as a secondary cause to 33, the figures under these heads during the preceding week being 314 and 62. The number of deaths from diseases of the respiratory organs was 560, or only 45 above the corrected average. Dr. Tomkins, the medical officer of health at Leicester, reports that influenza is still moderately prevalent in that town, but that the type is considerably milder than last year. Dr. Cameron Kidd, the medical officer of Bromsgrove, Worcestershire, in his report for the month of January showed how much influenza had increased the mortality amongst the aged. Since his report was written he stated that there had been a marked decrease in the epidemic. We understand also that there is a similar subsidence of influenza on the Continent.

HOUSING OF THE WORKING CLASSES IN CHELSEA.

THE Vestry of Chelsea has recently received a deputation from a number of inhabitants of the parish requesting that body to move the London County Council to devote to artisans' dwellings a particular site which had been cleared a short time since for the Chelsea approach to the new Battersea Bridge. The vestry agreed to memorialise the Council in the matter, and we presume that the Council will shortly be called upon to decide the question. Considerable clearances in Chelsea, it is said, have led to the displacement of many of the working classes, and if, without undue sacrifice of public money, accommodation can be provided for working people, it is a very proper thing to do. London, however, cannot afford to be extravagant in these matters, and everything must depend upon the question whether the monetary value of the site makes it prohibitory of being used in this way. The

changes which are taking place in the metropolis displace more than poor people; small tradesmen, professional men and others, all have to give way to the necessity for metropolitan improvements. No doubt inconvenience is experienced, and every effort should be made to minimise this; but we believe that the true policy of London is not necessarily to attempt to preserve land for any particular class, but to give greater facilities for people to live outside the more crowded portions of the metropolis, and to reach their work by an increase in the train service. London is far too densely crowded in many parts, and to attempt to rehouse working people under such conditions in these localities is no act of kindness to them, nor does it show consideration for their real welfare.

INFIRMARY ACCOMMODATION FOR TOXTETH.

THE need for proper infirmary accommodation in connexion with the Toxteth Workhouse has long been pressing, and matters were in a somewhat forward condition for making the necessary provision until the guardians met again last week, when it was decided that the intended loan of £43,500 for the infirmary was to be withdrawn, and that the contractors and architects should be approached with a view of getting rid of the whole business, until at some future date the subject should be again considered. The attitude of the guardians in this respect is a very serious one. At the meeting in question it was stated that no less than 176 inmates of the workhouse ought to be in an infirmary, which means that a large number of sick people are at present inadequately provided for. And not only so, but there is no proper means for the isolation of infectious cases. Thus the admission of two cases of typhus fever rendered necessary the removal of 100 persons from the ward in which the fever cases had to be accommodated. The utter wastefulness of such a state of affairs must be obvious to all who know the value of the accommodation thus rendered useless. But this is not the only drawback. So long as infectious cases cannot be properly isolated, so long must the sick poor, who are practically detained against their wills by reason of infirmity, be exposed to a source of danger and of death to which those who are responsible for their humane and proper treatment ought not to subject them. We trust that both official and local pressure will be put upon the guardians to right the present evil.

TRACHEAL TUGGING AS A SIGN OF ANEURYSM.

THE value of "tracheal tugging" as a sign of thoracic aneurysm has been investigated by Mr. Harold Grimsdale, of St. George's Hospital, who has communicated the results of his investigation in an interesting paper in the current number of the *Practitioner*. This sign, it may be recalled, was first mentioned by Surgeon-Major Oliver in a letter to this journal in 1878 (vol. ii., p. 406), and it consists in the sense of downward traction of the larynx with the systole when the thyroid cartilage is gently raised between the finger and thumb. But little attention was paid to the sign until last year, when we published communications from Dr. McDonnell of Montreal on the subject (THE LANCET, March 7th and 21st, and April 4th), and since then the observation has been frequently confirmed in connexion with aneurysms of the arch which impinge on the left bronchus. At a recent meeting of the Clinical Society Dr. F. Taylor showed a case which presented the sign in question. Mr. Grimsdale, whilst admitting that the sign is of value, being perhaps one of the earliest indications of an aneurysm in the above situation, shows clearly that it is a phenomenon which is frequently present in the absence of any aneurysmal dilatation of the vessel. In conjunction with Dr. Ewart, an examination was made of 118 hospital patients, among whom no fewer than fifty-one presented "tracheal tugging," the males preponderating. They noticed, however, degrees in the extent to which the tugging took place, and of four cases in which it was "marked," two were cases of aneurysm of the arch, one of emphysema and bronchitis, and one of chlorosis. Seventeen cases showed "moderate" tugging, twenty "slight" (including one of probable aneurysm of the ascending aorta), and seven "very slight." It is especially noted that of ten cases of mitral disease the sign was present only in one; in four of aortic valvular disease it was present in three. It was also present in only one of five cases of phthisis. It was increased by exercise and excitement, was synchronous with the cardiac systole, and almost always more marked during inspiration than during expiration (an exception to this rule being a case of emphysema, in which it was very marked during expiration). In discussing the *modus operandi* of the phenomenon, and endeavouring to harmonise some of the apparent anomalies as regards its presence or absence, Mr. Grimsdale inclines to the belief that it depends upon the aorta being brought into contact with the left bronchus during inspiration by the downward and forward displacement of the heart. He found, further, that it decidedly preponderated in people with full chests and prominent infra-clavicular regions, whilst in the flat-chested and stooping patients it rarely occurred, even under excitement. It would seem, then, that as a positive sign of aneurysm even marked tugging may not be absolutely diagnostic; but its absence "certainly denotes absence of any gross dilatation" of the part of the vessel near the left bronchus. The best plan to obtain the sign is for the observer to stand behind the patient and to gently raise the trachea by the tips of both index fingers placed beneath the cricoid cartilage.

THE PROPHYLACTIC INFLUENCE OF TOBACCO.

DR. V. TASSINARI, of the Institute of Experimenta Hygiene attached to the University of Rome, has been attempting to demonstrate the prophylactic advantages of tobacco smoking. He recalls the fact that in the eighteenth century, and even in the seventeenth, a certain number of medical men—Willis, Dimerbrock, and others—advised their friends to smoke in times of epidemic. At Strassburg, in 1842, Ruef called attention to the fact that the workers at the tobacco manufactory were exempt from almost all the prevailing epidemics. Pécholier, in the *Revue d'Hygiène* (1883, p. 523), proclaimed the same opinion, and Dr. Walter Cock of Texas was rash enough to recommend, in 1889, the use of tobacco as a preservative against phthisis. An American dentist—Dr. Miller of New York—made experiments in 1884 with the smoke of tobacco on the micro-germs of dental caries, and declared that the results were satisfactory and conclusive. Dr. Vassili of Naples employed in 1888 a small balloon, which he lined internally with a layer of gelatine containing cholera bacilli. He found that by drawing through this balloon the smoke of from one to four cigars—the number of cigars required depending on their strength in nicotine—the gelatine was completely sterilised. Dr. V. Tassinari has now repeated these various experiments, and maintains that the smoke of tobacco either entirely destroys or in any case retards, the development of the bacillus of cholera, of anthrax, and of pneumonia. Dr. Tassinari published twenty-one charts indicating the action of tobacco on various known microbes, according to the nature of the tobacco and the amount consumed. The latter varied from one to six grammes, smoked in from ten to thirty minutes. The bacilli of Asiatic cholera and that of Friedländer

(pneumonia) were always completely destroyed, no matter what sort of tobacco was used. The bacillus of anthrax resisted better, and that of typhoid was hardly affected by the smoke. As a practical result of these experiments Dr. Tassinari insists on the utility of smoking as a means of preventing the decay of teeth. He seems to imagine that women suffer more from dental caries than men, and attributes this difference to the fact that but few women smoke. It must be confessed that these experiments are not conclusive. There is a great difference between the sterilising of microbes in nutritive gelatine and in the human being. No one doubts the antiseptic qualities of nicotine. Sulphurous acid is also an antiseptic, but it still remains to be proved that London fogs and London smoke save the metropolis from zymotic disease.

METROPOLITAN PUBLIC GARDENS ASSOCIATION.

THE task which this Association has set itself is the very laudable one of securing available vacant plots of ground in the metropolis and transforming them into gardens for the health and recreation of the people. The Association is alive to the many reasons that could be urged for the existence of these open spaces in increasing numbers and dimensions. Besides the effects—mental, moral, and physical—on the individuals there is the wider consideration of sanitary effects on the population in general. The provision of public recreation grounds is not a mere question of ornamental philosophy, though of the purest sort, but it is a question of social economy and expediency. Those who live in the outskirts of the metropolis have many evidences of the growth of this already vast collection of bricks and mortar. Spots once green and fertile are now soot-begrimed and unrecognisable after the brief period of three or four years, and the consequent aggregation of the population requires yearly to be set off with more extended lung areas in this great city. This Association works in conjunction with the National Health Society. Its membership is increasing, and the good which it has already succeeded in effecting is testimony to the value of its aims. Its work is yearly increasing, and will increase so long as the builder plies his trade.

THE ETHICS OF LIFE INSURANCE AND DEATH CERTIFICATES.

A DOCTOR OF MEDICINE, who has practised for twenty years in the manufacturing districts of Lancashire, writing to *The Times*, seriously impeaches the good faith of his medical brethren in giving certificates to procure life insurance. He says that in his district it is the custom to insure the lives of pretty nearly every man, woman, and child. This is especially the case, it would seem, whenever any serious disease declares itself. And the people classify doctors as "good" or "bad," according to the talent and readiness which they show in giving a euphemism to a disease that is likely to be counted an objection by an office. There are, according to this authority, many "good" doctors who will modify phthisis of two years' duration into bronchitis of three months, cancer of two years' duration into tumour of three months, and so on. This is a serious charge, coming from a medical brother. It is true, he admits that the agents of the various offices, hotly competing with each other, are half willing to have such false and misleading certificates, and that they connive at them, seeing that they are paid according to the business they do. "Doctor of Medicine" declares that virtue and truth do not pay, and that he has had to suffer for refusing a certificate to an obvious drunkard. The evil does not stop here. One lie has to be followed by another, and the death certificate has to be incorrect. Not only so, old people and children, according to this writer, are frequently done to death for the sake of the insurance money. We cannot believe that any serious number of medical men would be parties to such fraudulent transactions, and we hope to see these injurious statements contradicted. If not, it is a matter for grave inquiry. If such charges against any medical man could be substantiated, they would surely amount to "infamous conduct in a professional respect."

SULPHONAL.

IN a lecture delivered at the Congress of German Neurologists in Baden, June, 1891, Dr. Gilbert of Baden Baden describes four cases which were treated in the Sanatorium there. Two of the patients were under treatment for the sulphonal habit, as it had become a perfect mania, so much so that the absence of it caused symptoms similar to those experienced when overcoming the morphia habit. This was not the case with the other two, but serious symptoms were evident. Besides the well-known injurious effects produced by the use of sulphonal, all the four patients were unable to write straightly and distinctly. The characters were unsteady, and in an ascending line from left to right. Attention is called to the fact that although the effects of sulphonal are well known, still it is used as freely as ever. In Germany it can even be obtained at chemists' shops without medical prescription. In conclusion, when the use of this drug seems unavoidable, it is recommended that it should be prepared as follows. Boiling water is poured on the dose of sulphonal and the mixture is cooled by constant stirring until it is just palatable. By this means precipitation is nearly avoided, and the drug enters the stomach in a dissolved form. Thus sleep is said to be generally produced in from fifteen to twenty minutes, and the troublesome feeling of weariness, enervation, &c. usually experienced by the patient on the day following the use of sulphonal does not appear.

THE PHYSICIANSHIP IN ORDINARY TO THE PRINCE OF WALES.

THE appointment of Dr. Broadbent as Physician in Ordinary to His Royal Highness the Prince of Wales will give general satisfaction to the profession. Dr. Broadbent's general reputation as a physician eminently entitles him to this post. It would be unsatisfactory if His Royal Highness had selected a mere specialist as his ordinary adviser. His health is a matter of the highest importance to the nation, and it is most desirable that it should be in the care of one who can regard it from many sides, and bring to the service a large experience.

THE INDIAN OPIUM TRAFFIC.

THE controversy respecting the Indian opium traffic still goes on much after the manner of an artillery duel at long range, and so far without any definite result. A comparison of the arguments used on either side is nevertheless instructive. On the part of the Indian Government we are met with an unqualified denial that the opium habit is decidedly on the increase in the country under its rule, even among those classes or in those localities where it admittedly prevails, and by an assertion that it is effectually held in check by legal restriction. At the same time we are told that opium smuggling tends to develop into a regular trade—a fact which at all events does not strengthen confidence in the decline of the habit. The opposite side of the question was lately presented to the public of this country in a letter by Mr. Donald Matheson, in which he criticises the position and arguments of the non-interference party. The Government of India, he reminds us, is more than a merely regulating authority. It holds a strict monopoly of the trade in opium, is at once the grower, manufacturer, and

vendor of the drug, and he is naturally disposed therefore to view the question of its use and abuse chiefly from a commercial standpoint. He points out that a statement that the opium consumption is as yet small in comparison with the population of the Indian Empire really furnishes a strong argument in favour of prohibition, inasmuch as it shows that the evil, if early dealt with in this way, may still be effectually extirpated. Finally, he quotes the authority of a declaration made by upwards of five thousand medical practitioners of the United Kingdom to the effect that the opium habit is morally and physically debasing, and that the drug itself should therefore in ndia, as in England, be classed as a poison and sold for medicinal purposes only. Nothing could be simpler or more scientifically accurate than this presentation of the subject. Thus much even the Indian Government may fairly be expected to concede, and we cannot doubt that it would do this and support the admission by practical legislation, but that there come in the rival interests connected with usage and revenue. We can all appreciate in some degree the resulting difficulty of its position, but this is no reason why the work of reform so greatly needed should be neglected. It remains to be seen whether a process of reduction, gradual if not rapid, in this injurious traffic cannot be effected without serious dislocation of present fiscal arrangements. Meanwhile we regard it as an obvious duty to maintain towards it an attitude of opposition, of which we may say that it is not the less impartial because condemnatory of the common use of a purely therapeutic and poisonous agent.

ROYAL COLLEGE OF PHYSICIANS.

THE series of lectures for the present year are announced as follows:—*Milroy:* by Dr. Francis Warner, "On the Physical and Mental Condition of School Children," March 8th, 10th, 15th, and 17th. *Goulstonian:* Dr. Sidney Martin, "On the Chemical Pathology of Diphtheria, compared with that of Anthrax, Infective Endocarditis, and Tetanus," March 22nd, 24th, and 29th. *Lumleian:* Dr. Pye-Smith, "On Certain Points in the Etiology of Disease," March 31st, April 5th, and 7th. The Milroy and Goulstonian lectures will be delivered in the theatre of the Examination Hall, Victoria Embankment.

THE LOCK HOSPITAL, LIVERPOOL.

IT is interesting at all times to contrast the position of a particular disease or operation at the present period with the views of its etiology and treatment held not exactly in the remote but in the comparatively immediate past. The reopening of the Liverpool Lock Hospital has afforded Mr. Fred. W. Lowndes an opportunity of reviewing, in the course of his address on that occasion, the history of its foundation in the form of a ward within the walls of the old infirmary, in 1749; its progress in 1833; and after a period of closure its reopening on Aug. 31st, 1891. Its important work has been performed in a quiet and unostentatious way. Increasing accommodation has been found for a class of patients with whose unfortunate maladies there is but little sympathy beyond the profession, to which, above all, they must look for assistance in times of direst trouble. By the erection of hospitals of this kind objectionable patients were removed from the general hospitals and treated by various methods, which speedily became the subject of study. Mr. Lowndes refers to what may be called the period of confusion in the treatment of venereal disorders, of misconception of its origin, and the generally erroneous nature of its dogmas. The subject is instructive from more than one point of view. The horrible scenes witnessed in metropolitan hospitals were loudly denounced so long ago as 1823 by Sir Astley Cooper, who, observing the miserable treatment of these unfortunate patients, condemned it in no measured terms: "When so infamous a practice prevails I cannot satisfy my own feelings by resorting to milk-and-water language. Patients are compelled to undergo so infamous a system of treatment that I cannot bear to witness it." These words and others like them had been repeated to the students of Guy's Hospital over and over again without any avail. On one occasion they fell on the attentive ear of one who could not rest until they were sent broadcast over the country in the columns of THE LANCET. Within a week of their publication in THE LANCET the venereal wards of Guy's Hospital were opened "under new and improved regulations." The march of progress and investigation has continued ever since. Mr. Lowndes truly remarks "that venereal diseases still demand our careful study, and it follows naturally that provision must be made for the careful observation and treatment of those suffering from them," if not in general hospitals, then in those specially set apart for such treatment. To these assistance cannot be denied on grounds either economic, charitable, humane, or moral; and, although certain pseudo-philanthropists have deemed it their duty to maintain the contrary, to the members of the profession of medicine it is not necessary to point out that a poor person suffering from venereal disease in an acute form, by whose fault soever, is as great an object of charity as any patient can be.

THE TREATMENT OF THE STATUS EPILEPTICUS.

THE *St. Petersburger Med. Wochenschrift* publishes an account of a method of treating the so-called "status epilepticus," which has been successfully adopted by Dr. Kernig. He gives the following particulars of a case treated by this method. A girl in the Obuchoff Hospital in St. Petersburg, after suffering a whole night from almost continuous epileptic convulsions, next morning was unconscious, but without any œdema of the lungs, and with a fairly good pulse. On the convulsions being renewed a hypodermic injection of 0·02 gramme of hydrochlorate of pilocarpine was given, and 1·5 grammes of camphor in an emulsion. Profuse perspiration followed, and the convulsions immediately ceased, but for an hour pulmonary œdema and collapse seemed imminent. These symptoms, however, passed off, and were followed by sound sleep and a good pulse. The patient was made to lie on her side to prevent annoyance from the excessive secretion of saliva.

THE DUSTMAN.

WILL the time ever come when our old enemy the dustman will be abolished? That his rule in many houses is still autocratic all will agree. He removes what he chooses, and will remove almost anything else "for a consideration." If "untipped" he is apt to be offensive; if "tipped," his care and attention in the removal of house refuse still depend greatly on the amount of the "tip." Of the cart in the street and the coadjutor of the dustman we have before spoken; and if we again allude to an unpleasant subject it is only to recognise that here and there a sanitary authority has done something for the public protection. The vestry of St. Giles' has made a step in advance which must have been marked with approval by many a Londoner. In this parish the open and commonly overfilled cart has been replaced by a neat iron waggon covered in segments by curved iron lids. Any one of these thrown open will receive the house tribute without serious risk of the cloud of filthy dust which commonly follows the progress of the dustman. We do not doubt that so enlightened a vestry has issued strict orders that the carts shall never be overfilled. In that case one of the smaller terrors of the London streets has been removed. The Public Health Act of 1891 gave new

powers to householders, which doubtless have had practical results; but some recent proceedings in the North London Police-court show that there is still great room for improvement. As usual, a public-spirited individual raised the question of the removal of house refuse, and issued a summons against the vestry clerk of Islington. After the issue of the summons the grievance was removed, and the summons therefore withdrawn, but not without a remark from the magistrate that the complainant had done the public good service.

CONSULTATION FEES RECOVERED BY LEGAL PROCESS.

A FELLOW of the College of Physicians is hindered by the by-laws of his College from enforcing payment of his fees in a court of law. And sometimes he has to suffer loss at the hands of ungrateful patients for want of such a power. Mr. Frederick Turner, M.R.C.S., of Buxton, brought an action against Mr. Isaac Ash, of Higher Buxton, to recover £22 fees for certain consultations with the defendant's medical adviser. THE LANCET was referred to as approving a fee of one guinea per consultation in the circumstances, the charge made with an allowance. Various practitioners of Buxton gave evidence in a similar sense. We are surprised that Dr. F. H. Collins, secretary to the Medical Ethical Association of Manchester, having been called for the defence, should, as is reported, have stated that he had never heard of a case of a doctor being consulted twenty-six times in thirteen days. He did not deny that the charges were the regular ones. The judge summed up firmly in favour of Mr. Turner's claim, and the jury, after a short absence, allowed it. The case seems to us interesting as showing that, apart from the by-laws of colleges, there is a remedy for consultants in courts as well as for general practitioners. It is well reported in the *Buxton Advertiser* of Feb. 13th.

INSANITARY DWELLINGS.

AN action has recently been heard in the Court of Queen's Bench which is of considerable importance especially because it may be expected that it will be followed by others where the circumstances are in any way similar. The Housing of the Working Classes Act, 1890, contains a provision which was previously a part of the Housing of the Working Classes Act, 1885. This provision is that "in any contract made after the passing of this Act for letting for habitation by persons of the working classes a house or part of a house, there shall be implied a condition that the house is at the commencement of the holding in all respects reasonably fit for human habitation. In this section the expression 'letting for habitation by persons of the working classes' means the letting for habitation of a house or part of a house at a rent not exceeding in England the sum named as the limit for the composition of rates by Section 3 of the Poor-rate Assessment or Collection Act, 1869." In London this is equal to a rent not exceeding £20. In the case in question the plaintiffs alleged that the tenement was insanitary, that the drainage was defective, and that the flushing apparatus of the water closet was defective so that it was without water-supply, with the result that bad smells prevailed, and four of their children eventually suffered from diphtheria and died. The defendants on their part alleged that the tenement was in a condition reasonably fit for habitation when the plaintiffs took it, and that the insanitary condition of the premises which caused the death of the children was due to the uncleanliness of the plaintiffs themselves, and to their not allowing the rooms to be sufficiently ventilated. In the end the jury returned a verdict for the plaintiffs, with £77 10s. damages. With the condition of the house we need not concern ourselves. It was admitted to be faulty, and it is immaterial for our purposes who was responsible for its defects. But the question may seriously be asked, Is the evidence that diphtheria is due to faulty drainage sufficiently strong for a definite opinion to be formed on this point? The published reports of the case make no reference to medical evidence on this point. It appears to have been accepted that insanitary conditions and diphtheria must necessarily be related as cause is to effect. There is not a word as to whether diphtheria was prevalent in the school which the children attended, or any reference to inquiry as to whether there were grounds for suspicion of the milk-supply. The relation of diphtheria to faulty sanitary surroundings is not of a very certain character. Dr. Thorne, discussing this subject in his recent work on diphtheria, says: "I am inclined to regard the influence of a sewage-polluted air as operating in much the same way as the scarlet fever poison, in so far as predisposition to diphtheria is concerned." But this is all, and a hasty conclusion that occurrences of this disease are actually due to such condition is not one which should be made. We need not say that we have no desire to defend persons who may let insanitary houses, nor do we fail to see that the decision in the case to which we have referred may serve as a useful stimulus to landlords. But the fact that an etiological question such as the causation of diphtheria has now attained a monetary importance makes it very necessary that it should not remain obscure. We would gladly see, if it were possible, cases of this sort referred by the Court to a sanitary expert for inquiry and report.

RULES FOR ISOLATION HOSPITALS.

THERE is a not unfrequent demand for a model code of regulations for the control and management of isolation hospitals, their staff, patients, visitors, &c., but owing to the wide differences between the institutions which have been provided by sanitary authorities no general code has ever been compiled. Every new set of rules is therefore of interest, and for the information of those who are concerned in the administration of isolation hospitals we would draw attention to a code which has just been issued by the Health Committee of the Nottingham Town Council. The rules have been compiled by Dr. P. Boobbyer, the borough medical officer of health, and have received the approval of the corporation.

PHAGOCYTOSIS IN RELATION TO IMMUNITY.

THE discussion which opened at the Pathological Society last Tuesday served to show how difficult and intricate is the question of immunity from specific diseases, and also how various may be the interpretations put upon the results of experimental observation. The physiological fact of phagocytosis is generally allowed, and there does not seem to be any serious difference of opinion as to the existence of an influence on the behaviour of leucocytes, to which the term "chemiotaxis" has been applied. But, as Professor Burdon-Sanderson pointed out in the weighty remarks that he made, the wider application of phagocytosis to protection of the organism against the attack of infective virus implies a very great addition to the known powers and properties of the leucocyte. Dr. Sims Woodhead, who naturally went over some of the ground which he has recently dwelt upon in these columns, and who, on this occasion, was the sole advocate of the doctrines of Metchnikoff, anticipated this objection in his remarks on the necessity for special stimuli to evoke the latent properties of these protoplasmic elements of the body; and although Dr. Klein, who assumed a very militant attitude towards the whole theory, pointed out the selective power of the various specific poisons for special tissues, yet it is open to conjecture that it may be just in these tissues that

the phagocytic action takes place in such diseases. Dr. Klein's criticism, founded on conditions in which leucocytes are apparently destroyed by microbes rather than the reverse, was not so weighty as were his interesting observations upon the behaviour of anthrax bacilli introduced into the lymph sac of the frog. Here he came to close quarters with the supporters of phagocytosis, since he was dealing precisely with a class of experiments upon which a large part of their argument rests. Mr. Kanthack's contribution to the debate was a thoughtful and thorough consideration of the matter. He advanced many objections to the assumption that phagocytosis by itself is adequate to explain the phenomena of artificially induced immunity. But, as we have said, the subject is one which bristles with difficulties, and it is not possible as yet to harmonise the several observations. We cannot expect that the debate will succeed in determining a problem that is engaging the profound attention of the most advanced and thoughtful school of pathologists. It will, however, serve to indicate those parts of the question which most demand investigation, and thus tend to its further elucidation.

INFLUENZA AS AN INFECTIOUS DISEASE.

UNDER the title of "Influenza and the Laws of England concerning Infectious Diseases," Dr. Sisley has reprinted a paper which was read before the Society of Medical Officers of Health. In the course of his remarks he notes with satisfaction the action which the Dover sanitary authorities considered it was "their privilege and duty" to take—viz., to issue in the name of the mayor, aldermen, and burgesses a solemn warning to the public of the dangerous and infectious character of influenza, together with the further information that the disease is often spread by careless exposure of infected persons, and ending up with the threat from the Public Health Act of the usual penalty for wilful exposure of an infected person. Counsel's opinion on the powers of sanitary authorities as to influenza is appended, but it cannot be said to advance matters very materially. Asked whether influenza comes within either the common law rule or the statutory description, it is gravely answered that "it must be within both or neither," that the question is a "very doubtful one," and that a mere announcement of intention to act on the Public Health Act would not expose the local authority to hostile proceedings, and might meanwhile do good. The advantage of making an empty threat seems very much open to question. Merely to threaten to act without the intention, and possibly the power, to do so is far more likely to lead to callous disregard of the really useful provisions of the Public Health Act than to produce any marked influence upon an epidemic which already shows cheering indications of abatement.

THE GYNÆCOLOGICAL AND OBSTETRICAL CONGRESS.

THE official programme of this Congress has just been issued. It bears the signatures of the President, Dr. Kufferath, Professor of Obstetrics at the University of Brussels, and the general secretary, Dr. Jacobs. The Congrès International Périodique de Gynécologie et d'Obstétrique will in future assemble every four years in Belgium and Switzerland alternately. Communications and discussions may be delivered or spoken in French, English, or German. Each member of the Congress must subscribe 30 fr. (24s.) or pay a composition fee of 300 fr. (£12), which will admit him to all future meetings. The opening of the first session will take place at Brussels on Wednesday, Sept. 14th, at 1 P.M., the proceedings to conclude at 6 P.M. on Monday, Sept. 19th. The sittings will be held every day after Wednesday from ten to twelve in the morning and from three to six in the afternoon. Gentlemen who wish to read papers at the Congress are requested to make known their intention before July 1st, 1892. All who desire to join in the discussion on the three chosen subjects (pelvic suppuration, extra-uterine pregnancy, placenta prævia) are recommended to send in their names to the general secretary before Aug. 15th. An exhibition of gynæcological and obstetrical instruments will be held during the sitting of the Congress. For forms of application for admission and all desired information concerning the Congress a letter must be addressed to Dr. Jacobs, General Secretary, 12, Rue des Petits Carmes, Brussels.

DIPHTHERIA AT ESHER.

IT is not many months since we sent a commissioner to report upon the prevalence of diphtheria at Esher. At that time there was a strong local feeling that the disease was in some way connected with the new system of sewers, but the evidence obtained went to show that the grounds for this belief were not very substantial and that other causes had doubtless been in operation. The disease unfortunately still prevails; and the Local Government Board have requested the Kingston rural sanitary authority to instruct Dr. Gibbes, their medical officer of health, to prepare a report as to its continuance, as to the causes of its diffusion, and as to the means taken for its prevention.

WASHING OUT THE STOMACH IN CHLOROSIS.

THE *Wiener Klinische Wochenschrift* refers to a communication by Dr. Pick, who publishes the results of some observations he made in Nothnagel's clinic to determine the relation which exists between affections of the stomach and those not infrequent cases of chlorosis in which the leading symptoms are of a gastric character. Some connexion between the two has been proved to exist in some cases of pernicious anæmia. The *Wochenschrift* does not consider that Dr. Pick's contribution gives a decided answer to the question, but points out the importance of one result of the experiments. He found, as others have done before him, in all the cases an atonic condition of the stomach, which had not digested the food taken on the previous day, although the patient was fasting at the time of the observation. In these cases Dr. Pick was able to cure the chlorosis quickly by washing out the stomach at stated intervals. In several instances no benefit had been derived previously by treatment with iron. Washing out the stomach prevents abnormal decomposition, which by auto-infection causes the blood dyscrasia. Dr. Pick, with the same object in view, and with equally favourable results, administered creasote when flushing could not be resorted to.

CEREBRAL ABSCESS.

IN the Bulletin of the Johns Hopkins Hospital the results of an examination for micro-organisms in the pus of a cerebral abscess is reported by Dr. William H. Welch. The patient, who had met with an accident ten days before his admission to the hospital, and had, the day before admission, what was called a fit, was found to have a suppurating wound below and to the outer side of the left frontal eminence. There was a depressed fracture of the skull underneath, and on this being elevated and removed the dura mater appeared normal. After the operation, for a few days the patient's general condition seemed good; but he soon became dull and lethargic, with periods during which he was much brighter. Without presenting any urgent symptoms previously, he complained of headache, and quickly passed into a condition of stupor and died somewhat suddenly. At the necropsy a large collection of

green offensive pus was found occupying the centrum ovale in the frontal region, not extending so far back as the central convolutions. The grey matter was only involved at one point, in the middle frontal convolution. Cover-glass preparations were made from the pus in the abscess, and numerous cocci were found in pairs and in small clumps. They presented the usual appearances of the staphylococcus pyogenes. An attempt was also made to obtain cultures on agar-agar, but these, tried in various ways, remained sterile. An interesting point occurs in the fact that the pus had a distinct odour of sulphuretted hydrogen, and a suggestion is thrown out by Dr. Welch that the coccus named (for no other organism was found) may produce in the brain decomposition leading to the production of this gas.

MASON SCIENCE AND QUEEN'S COLLEGES, BIRMINGHAM.

THE legal difficulties as to the amalgamation of these Colleges have been settled by Mr. Justice Chitty in the Chancery Division of the High Court of Justice. He referred the petition of Queen's College to chambers for approval of the scheme, expressing the opinion that, speaking generally, it was a highly beneficial arrangement. By the scheme the medical part of the education now carried on at Queen's College will be transferred to the Mason Science College, thus avoiding a reorganisation of Queen's College and a large extension of its buildings. We look upon this amalgamation as a precursor of a Midland University, and are pleased that such a satisfactory arrangement between colleges so distinct in their inception should have been arrived at.

HYPODERMIC INJECTION OF IODOFORM IN LOCALISED TUBERCULOSIS.

DR. WEIDEMÜLLER, in the *Münchener Med. Abhandlungen*, reports very favourably upon the treatment of localised tuberculosis by the injection of iodoform. This treatment was adopted in twenty-two cases, comprising four of disease of the elbow-joint, four of the knee, five of the ankle and tarsus, and three of the wrist. Of the six remaining cases two were due to multiple tuberculosis, two to indolent abscess, and two to fistula after resection. A solution containing from two to three grammes of iodoform in glycerine was used in each instance, with the following results: two patients were cured, eleven considerably improved, three slightly improved, and in one case only was the treatment entirely unsuccessful.

THE SANITARY STATE OF PUDSEY.

A TRENCHANT REPORT has been issued by Dr. W. L. Hunter on the sanitary state of Pudsey. There is no regular system of drainage, the becks act as main sewers, the road drains are old, shallow, permeable rubble structures, and when opened are frequently found to be more than half full of sediment, some pipe drains being "solidly full." The drains have no means of ventilation, whilst the sewage which escapes from them gets into mill-dams or directly into one of the streams which flow round the town. House drainage, too, is much the same. In some districts scarcely a house is properly drained, and, although a notice was given in 1890 that all sinks should be trapped and disconnected, hardly any of the house-owners took notice of the requirement. Much the same applies to nuisances, and it is added that, on account of what is considerately termed "leniency" on the part of the Board, very little notice is taken of any orders issued as to nuisances. The general death-rate was 21·7 per 1000 last year. This is not a specially excessive one, but the conditions obtaining in the place are precisely such as lead to sudden and heavy preventable mortalities. The building by-laws are antiquated, and damp walls and foundations, together with "jerry" structures, are not uncommon; the slaughter-houses are, in many instances, very defective; and it is clear that grave sanitary defects exist in abundance. The local press, in referring to the report, admits the energy and ability of the sanitary staff, and points to certain excellent work on their part. But it adds that Pudsey is practically in the same state to-day as it was twenty years ago.

THE TREATMENT OF ECZEMA.

THE *Gyógàszat* publishes an account of Dr. Berthold Löwengard's new treatment of eczema. He had under his care a child six months old suffering from severe seborrhœa, which had resisted all the ordinary methods of treatment. Upon having recourse, however, to a 2 per cent. solution of creoline, in three weeks' time the disease had entirely disappeared, not a symptom remaining. He has made use of a solution of creoline with equally favourable results in papular and pustular eczema and in eczema of the genital organs. One of the latter cases was complicated with anal fissure, but this healed in four days after treatment with creoline and strict attention to cleanliness. Dr. Löwengard was occasionally obliged to substitute other remedies for the creoline in the course of treatment, but he succeeded in all cases in relieving the painful symptoms of the acute stage.

THE OFFICE OF INSPECTOR OF EXAMINATIONS.

THE appointment of inspectors and visitors of examinations for the General Medical Council will be made for the present year by the Executive Committee. In future the appointment will be made by the Council at its May session. For 1892 the Executive Committee will assign duties to the inspectors and visitors. The committee will meet on Monday for this and other purposes. Those who intend applying should lose no time in doing so.

THE ACTION OF STRYCHNINE ON THE STOMACH.

THE *Khirurgicheski Vestnik* publishes an account of some experiments by Gamper on the action of strychnine on the stomach. Observations were made on seven persons, five of whom were in health, one suffered from gastralgia with excessive secretion of gastric juice, and the last (Gamper himself) from gastric catarrh. The observations extended from twenty to thirty days, and during the first and last week no strychnine was given to excite the stomach. Ewald's test-breakfast was given, and observations were undertaken to determine the volume of gastric juice, the percentage of total acidity, the proportion of hydrochloric acid by weight, the digestive power of the juice, the result of fermentation and the absorbent power and movements of the stomach. Nitrate of strychnia was given at breakfast time in doses varying from 0·002 gramme to 0·005 gramme, but sometimes increased to 0·015 gramme. The activity of the stomach was increased in all respects, with the exception of that due to the ferment and the lactic acid. Gamper attributes the usefulness of the drug to the increased excitability of the medulla caused by the strychnine.

THE TREATMENT OF PULMONARY GANGRENE.

DR. O. HEWDKE of Warsaw, in the *Deutsche Medicinische Wochenschrift*, gives particulars of his treatment of pulmonary gangrene, with notes of four cases. In all these the usual remedies, such as turpentine, creasote, inhalations of carbolic acid, &c., had been tried without effect.

He then made antiseptic injections into the gangrenous tissue, and during this treatment considerable improvement was observed, amounting in one case to almost complete cure. The syringe used had a capacity of 2·5 cubic centimetres, and was provided with a needle from 5 to 7 centimetres long. Dr. Hewdke first made use of menthol, but as this caused unpleasant symptoms, he substituted a ¼ to ½ per cent. alcoholic solution of thymol, which could be well borne to the extent of from 2 to 2·5 cubic centimetres. Local irritation of the skin or subcutaneous tissue was not observed, except where the injections had been frequently repeated. The mechanical part of the treatment presented no difficulties. Immediately the needle reached the cavity a paroxysm of cough occurred, followed by free expectoration, the patient both tasting and smelling the injected fluid. Dr. Hewdke, with other observers, recommends the selection of recent cases and those presenting superficial and non-tuberculous cavities for this method of treatment.

WE regret to have to record the death of Dr. John W. Taylor, medical officer of health of the borough of Scarborough, which took place suddenly on the 15th inst. from heart disease, while visiting a patient. Dr. Taylor was J.P. for the North Riding, and was frequently engaged by the Local Government Board in investigating outbreaks of zymotic disease, and last year he made a report as to the prevalence of typhoid fever on the Teesside.

The State Board of Health of Louisville, Kentucky, are beginning the prosecution of quacks and travelling doctors for acting illegally. This is one of the many signs of a determination on the part of medical authorities in the States to advance education and to draw a just distinction between those who are and those who are not educated.

THE council of the Sanitary Institute have accepted an invitation from the town council of Portsmouth to hold their annual congress and exhibition in that town in the autumn of this year.

YELLOW FEVER appears to be raging with unmitigated fury at Santos, Brazil. As many as 150 persons are reported as dying in one day.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6459 births and 4514 deaths were registered during the week ending Feb. 13th. The annual rate of mortality in these towns, which had declined from 35·4 to 26·2 per 1000 in the preceding three weeks, further fell last week to 23·1. In London the rate was 24·6 per 1000, while it averaged 22·2 in the thirty-two provincial towns. The lowest rates in these towns last week were 16·6 in Bradford, 17·0 in Birkenhead, 17·3 in Huddersfield, and 17·9 in Leeds; the highest rates were 25·6 in Oldham, 27·1 in Newcastle-upon-Tyne, 30·6 in Preston, and 32·0 in Nottingham. The 4514 deaths included 386, which were referred to the principal zymotic diseases, against numbers declining from 604 to 440 in the preceding four weeks; of these, 192 resulted from whooping-cough, 66 from measles, 46 from diarrhœa, 39 from scarlet fever, 34 from diphtheria, 8 from "fever" (principally enteric), and one from small-pox. The lowest zymotic death-rates were recorded in Brighton, Norwich, and Bradford, and the highest in Oldham, Wolverhampton, Swansea, and Blackburn. The greatest mortality from measles occurred in Swansea, Sunderland, and Liverpool; from scarlet fever in Swansea; from whooping-cough in London, Oldham, Sheffield, Bristol, Wolverhampton, and Blackburn; and from diarrhœa in Swansea and Preston. The mortality from "fever" showed no marked excess in any of the large towns. The 34 deaths from diphtheria included 18 in London, 3 in Sheffield, 2 in Manchester, and 2 in Newcastle-upon-Tyne. One fatal case of small-pox was recorded in Oldham, but not one in any other of the large towns; 8 small-pox patients were under treatment in the Metropolitan Asylum Hospitals, and 1 in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of last week was 1244, against numbers declining from 1397 to 1274 at the end of the preceding three weeks; 117 new cases were admitted during the week, against 100 and 101 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 1465, 1192, and 761 in the preceding three weeks, further declined last week to 560, but were 45 above the corrected average. The causes of 92, or 2·0 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Croydon, Portsmouth, Bristol, Norwich, Sunderland, and in seven other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Preston, Sheffield, and Sunderland.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 27·2, 24·7, and 22·0 per 1000 in the preceding three weeks, further declined to 20·8 during the week ending Feb. 13th, and was 2·3 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·1 in Edinburgh and 17·1 in Leith, to 27·2 in Greenock and 30·9 in Perth. The 578 deaths in these towns included 22 which were referred to whooping-cough, 10 to diarrhœa, 6 to measles, 4 to scarlet fever, 3 to "fever," 1 to diphtheria, and not one to small-pox. In all, 46 deaths resulted from these principal zymotic diseases, against 41 and 55 in the preceding two weeks. These 46 deaths were equal to an annual rate of 1·7 per 1000, which was 0·3 below the mean rate last week from the same diseases in the thirty-three English towns. The fatal cases of whooping-cough, which had been 16 and 20 in the preceding two weeks, further rose last week to 22, of which 11 occurred in Glasgow and 6 in Aberdeen. The 10 deaths referred to diarrhœa showed a further increase upon recent weekly numbers, and included 4 in Glasgow. The 6 fatal cases of measles were within one of the number in the preceding week, and were all recorded in Glasgow, where 2 of the 4 deaths from scarlet fever also occurred. The fatal cases of diphtheria, which had been 4 and 10 in the previous two weeks, declined to 1 last week, which was registered in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had declined in the preceding three weeks from 230 to 173, further fell last week to 146, but slightly exceeded the number in the corresponding week of last year. The causes of 41, or more than 7 per cent., of the deaths last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 54·1, 41·5, and 33·6 per 1000 in the preceding three weeks, further declined to 31·8 during the week ending Feb. 13th. During the first six weeks of the current quarter the death-rate in the city has averaged 40·0 per 1000, against 35·8 in London and 20·9 in Edinburgh. The 213 deaths in Dublin during the week under notice showed a decline of 12 from the number in the preceding week, and included 3 which were referred to whooping-cough, 1 to measles, 1 to "fever," 1 to diarrhœa, and not one either to small-pox, scarlet fever, or diphtheria. In all, 6 deaths resulted from these principal zymotic diseases, equal to an annual rate of 0·9 per 1000, the zymotic death-rate during the same period being 2·2 in London and 0·6 in Edinburgh. The fatal cases of whooping-cough, which had declined in the preceding three weeks from 10 to 2, rose again to 3 last week. The death referred to "fever" corresponded with the number in the previous week, and was certified as enteric fever. The 213 deaths in Dublin last week included 29 of infants under one year of age, and 73 of persons aged upwards of sixty years; the deaths of infants showed a slight increase, while those of elderly persons showed a further decline from the high numbers recorded in recent weeks. Six inquest cases and 8 deaths from violence were registered; and 59, or more than a third, of the deaths occurred in public institutions. The causes of 14, or nearly 7 per cent., of the deaths in the city last week were not certified.

Correspondence.

"Audi alteram partem."

THE GRESHAM UNIVERSITY.

To the Editors of THE LANCET.

SIRS,—In your leading article of last week you referred to a quotation, or supposed quotation, from a speech of mine, with the perfectly justifiable remark that any words of mine were merely the expression of a personal opinion, and therefore, of course, unimportant in the discussion of a question of medical education. But I am not disposed to sit down under the false imputation of having said a foolish thing, and of having injured a good cause by my folly.

In a document put out by an anonymous committee sitting at the Outer Temple, with Mr. C. S. Roundell of Merton College, Oxford, for chairman, and Mr. J. S. Hill, of the Chelsea Branch of the London University Extension Association, for Secretary, after stating that "there is every reason to fear . . . the standard of degrees in the Gresham University will be unduly lowered," this committee without members, whose chairman and secretary are alike unknown to University education and to medical education in London, proceed as follows: "These apprehensions are confirmed by the official utterances of prominent promoters of the scheme, who have not hesitated to purchase the coöperation of the medical schools by the ominous suggestion that the mere qualification granted by the General Medical Council shall also qualify candidates (*per saltum*) for the Albert M.D. degree."

The use of the cant phrase *per saltum* shows that reference is made to my speech at the Westminster Hospital Medical School, which was (very imperfectly) reported in *The Times*, and still more imperfectly quoted—I might say garbled—in the *Quarterly Review*. To all I said I adhere.

In the case of students now studying in the medical schools who have satisfactorily performed a part of their course, I should rejoice to see, and I believe there will be no legal difficulty in providing, that they should have access to degrees in the Gresham University without being compelled to begin their students' course over again. This, however, must be subject to their giving satisfactory evidence of scientific and general attainment. Further, seeing that all students will be compelled to obtain a qualification outside the University at or about the time when they would, if the degrees conferred a qualification, be going in for an M.B. degree, I think it would be well for the medical authorities to consider whether they may not with advantage dispense with the M.B. degree altogether, and allow licentiates to proceed to the M.D. degree, as has sometimes been the case in other universities, *per saltum*. That the standard of the M.D. should in this way be lowered I have not proposed, and am sure it would be scouted by the authorities I was addressing, as such a proposal would deserve. That I said the mere qualification should also qualify for the M.D. degree is an entire mistake.

I am, Sirs, yours truly,

Whitehall, S.W., Feb. 17th, 1892. GEORGE YOUNG.

POST-MORTEM APPEARANCES OF THE BRAIN OF INFLUENZA PATIENTS.

To the Editors of THE LANCET.

SIRS,—With your permission I will briefly state the results of post-mortem examinations of the brain made at the West Riding Asylum in cases of influenza, in order that they may be compared with those quoted by Dr. Althaus from a Danish medical periodical. The morbid conditions described by the Danish observer and dwelt upon by Dr. Althaus in his letter may be summarised as follows:—(1) Hyperæmia at the base of the brain, arteries at base filled to bursting; (2) a most intense hyperæmia of the pia mater and brain; (3) increased consistence of brain and spinal cord; (4) fresh pachy- and lepto-meningitis. In addition, Dr. Althaus infers from the description that intense congestion of the medulla existed. During the spring and early summer of last year the brains of thirteen cases dead of influenza and its pulmonary complications were examined here. The results may be stated as follows, with strict regard to the morbid conditions specified above: 1. The arteries at the base are described as "healthy," "normal," and "atheromatous"; there is no mention of congestion. It is quite improbable that congestion in a remarkable degree should have escaped notice and record. 2. In two cases the "internal membranes" are described as "congested," in one as "perhaps congested." In two others it is stated that the pia contained but little blood. In the remaining cases the lepto-meninges were either normal or showed the changes of chronic brain disease (thickening, opacity). As regards hyperæmia of the brain itself, one case showed "much injection of grey and white matter throughout," and "the internal capsules were notably injected." In another the grey matter was "slightly congested." In a third the white matter was "congested in the posterior part of the brain." In two other cases the brain is described as "pale." In the remaining cases the colour was the average. 3. There is no note of increase in consistence in any of the cases; in nine the brain is said to have been of "reduced consistence." 4. No pachy- or lepto-meningitis in any of the cases. Lastly, if we take (as Dr. Althaus does) the state of the arteries at the base of the brain as a criterion of the vascular condition of the medulla oblongata, it may be inferred that no congestion existed in this organ in these cases, an inference which may be drawn with the greater confidence in view of the fact that the bulb is invariably examined in every necropsy held here. It is therefore extremely improbable that noteworthy congestion would have escaped detection. Apart from the testimony of the records, I am informed by my colleagues, who made the examinations, that they have no recollection of remarkable hyperæmia in any of these cases, whether at the base of the brain or elsewhere. I am, Sirs, yours faithfully,

EDWIN GOODALL, M.D Lond., B.S., M.R.C.P.,
Pathologist, West Riding Asylum, Wakefield.

Feb. 15th, 1892.

DEATH UNDER ETHER.

To the Editors of THE LANCET.

SIRS,—I beg to forward the particulars of a case of death under the influence of ether, which occurred on JAN. 29th at the Royal United Hospital, Bath. On JAN. 27th I admitted into the hospital, under the care of Mr. Freeman, S. D——, aged thirty-seven, a dustman, who was suffering from a small strangulated right inguinal hernia. He had attended as an out-patient at the hospital on the previous day (and was seen by one of the honorary assistant medical officers), complaining of symptoms which appeared to be due to his drinking habits, he making no mention of the rupture. The patient, although very weak, walked to the hospital on the day of admission. He was placed in bed and the usual measures for taxis were employed; but, these proving unavailing, and his general condition becoming rapidly worse, he was given an enema of brandy, and taken to the operating theatre for the purpose of performing herniotomy. On examination no sign of organic lesion was discovered in the chest, and ether was slowly administered by myself. There was some struggling at the commencement, but anæsthesia was induced in from six to eight minutes, and the operation was begun by Mr. Freeman. Two minutes later breathing ceased (the temporal pulse persisting), after three or four shallow respirations. There was no stertor or mydriasis. The tongue was immediately drawn forward, the head thrown back, and artificial respiration performed, enemata of brandy and injections of strychnia being given and the faradaic current employed to the phrenic nerves. A few ounces of dirty bilious fluid escaping from the mouth soon after, tracheotomy was performed to obviate the risk of any foreign matter being sucked into the lungs. Although artificial respiration was continued for an hour and a half, all efforts to resuscitate the patient were ineffectual, no signs of vitality being noted after the cessation of breathing. A post-mortem examination was made by myself thirty-six hours later. Rigor mortis was marked. On opening the hernial sac a small knuckle of ileum was alone seen. This was very deeply congested, but the congestion did not extend to the mesenteric border, involving only about two-thirds of the circumference of the gut. The bowel was adherent to the sac round the neck, and there were a few flakes of recent lymph on the abdominal side of the ring. Beyond a few atheromatous patches on the aorta above the sigmoid valves and slight

marginal emphysema, no abnormal appearance was detected in any of the organs of the body.

I am, Sirs, yours obediently,
E. H. BIDDLECOMBE, M.B Lond.,
Resident Medical Officer, Royal United Hospital, Bath.
Feb. 15th, 1892.

THE ASSOCIATION OF DIPLOMATES AND STUDENTS OF THE LONDON MEDICAL SCHOOLS AND THE PROPOSED GRESHAM UNIVERSITY.

To the Editors of THE LANCET.

SIRS,—I am sending you a parchment skin with print of petition attached which you have kindly consented to place in your office for signature by diplomates and students of the London medical schools interested in the movement. May I ask you to be good enough to allow me to announce through the medium of your columns that the original petition is, by consent of the President of the British Medical Association, placed in the Library of the Association at No. 429, Strand, and that other parchment skins have been sent to the deans of the various London hospitals for signature by students and resident diplomates. My committee have found it impossible to send the original petition from house to house, and they trust that the diplomates will so far consult their own personal interests as to put themselves to the slight trouble of calling to sign the petition at one of the places where the skins are left.

I am, Sirs, yours faithfully,
ERNEST W. GREENWOOD, Hon. Secretary.
Serjeants' Inn, Temple, Feb. 17th, 1892.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Hospitals.

DURING the past week or two many of our local medical charities have held their annual meetings, and, unfortunately, with the majority of them financial difficulties are the rule, income and expenditure balancing on the wrong side. At the Children's Hospital a good year's record of work was presented. In the out-patient department 10,571 cases have been treated; whilst the number admitted as in-patients was 1249, the average cost of these latter being £5 18s. 9*d*. The reputation of the hospital as a training school for nurses is maintained, 280 applications for admission to the nursing staff having been received during the year. The total expenditure had been £7330, and the ordinary income from subscriptions &c. had fallen £1000 below this amount. Mr. Oliver Heywood, who for many years has been one of this hospital's warmest supporters, foreshadowed the possibility in the near future of some application of public moneys to the support of medical charities, and the Mayor, in his speech at the meeting, more than hinted at the same thing. As a Bill has been introduced into the Commons this session having for its object this very proposal, it is possible public attention may be directed to the matter of rate support to hospitals.—The Hospital for Skin Diseases (which was originally an off-shoot of the Lock) wants to extend its work by providing accommodation for in-patients, and the committee are doing their best to obtain funds for this purpose.—The report of the managers of the Eye Hospital was the exception to the rule; for, without any diminution of efficiency, they were able to point to a balance of £957 in excess of expenditure. They referred with gratitude to the support they receive from the adjoining districts and places outside Manchester, from whence, as with most of our other hospitals, so many of the patients come. Nearly 18,000 out-patients and 1241 in-patients is the record of the year's work here in bald figures.—The Clinical Hospital for Women and Children had its annual meeting, presided over by the Bishop, and the only unsatisfactory item of its report was the adverse financial one. The report showed a deficiency of £1625, and, unless help be forthcoming, the work of the charity will have to be curtailed. Here again Mr. C. Schwann, M.P., who moved a vote of thanks to the staff, alluded to the possibility of support being given from the rates for public hospitals, and expressed himself as being of the same opinion as the Mayor in this respect.—The eighth annual meeting of the Dental Hospital was held yesterday. Up to the present only out-patients have been dealt with, the present accommodation not permitting the treatment of in-patients. The committee appeal for funds to provide a new building, in which the latter can be received. They have procured a suitable site from moneys received from the late Mr. Procter, by whom so many other Manchester charities have been helped, and hope at an early date to have funds sufficient to commence building operations. Last year 12,072 patients were treated, a considerable number of whom were attended in the evening, thus preventing loss of time to poor people engaged at work during the daytime.—At the annual meeting of the Blind Asylum a very discordant note was struck. This institution contains 170 patients, and usually pursues the useful tenour of its way without attracting much public attention. This year, on submitting the minutes for confirmation, a proposal to advance the secretary's salary by £50 was opposed by Messrs. Hobbs and Helm, both of whom have taken an active part in the management. The proposal was, however, adopted by the meeting (which was a comparatively small one); but when the names of the members of the Board for the ensuing year were before the meeting these two gentlemen were blackballed and others substituted. This action has caused much adverse criticism, especially as Mr. Helm is known throughout the city as a warm-hearted philanthropist, helping in the work of more than one local charity with his time, energy, and money.

Hospital Sunday.

Sunday last was set apart as Hospital Sunday, and Saturday next will be Hospital Saturday. This is the twenty-third time in which funds have been raised in this manner for the hospitals here. Last year upwards of £8800 was obtained. Sunday last was, unfortunately, a wet day, and not propitious for the occasion. The committee appeal strongly this year for assistance from the numerous towns and districts which furnish so many of the patients to our hospitals, though many of these have of late years either erected or enlarged their own local hospitals.

Town Refuse.

Suburban districts, like cities, are getting the problem of disposal of their refuse prominently thrust upon them. The Withington Local Board, whose township borders closely on us, has been making application to borrow money for the erection of a destructor, but was opposed by one of our boards of guardians on the ground that the site was in too close proximity to their workhouse. Seeing, however, that the distance therefrom was between three and four hundred yards, and that many towns have them working, apparently without nuisance, in the midst of dwelling-houses, the opposition appears scarcely called for.

Drink or Apoplexy?

It sometimes happens that the police are blamed for keeping persons locked up in a cell as drunk when the unfortunate individual has been suffering from cerebral hæmorrhage. The difficulty which is at times experienced in diagnosing these cases has received an unfortunate illustration recently. A man who had been drinking and fighting was taken to the infirmary with a scalp wound. After being dressed he was sent away in charge of the police, who locked him up as drunk, but shortly afterwards brought him back to the infirmary by order of the inspector, who thought him suffering from something more than drink. He was again examined by the house surgeon, together with another resident officer, who both failed to detect any symptoms of serious injury, and he was again sent back to the police cells. The following morning he was admitted to the infirmary in an unconscious condition, and died a few hours afterwards. At the post-mortem examination was discovered a fracture at the base of the skull, with extensive hæmorrhage into the brain.

Medical Scholarship.

Slowly year by year the number of prizes and scholarships in the medical department of the college are increasing. Under the will of the late Mr. Henry Agnew £1000 is provided to found another medical scholarship. By the same will the Children's Hospital benefits to a like amount.

Influenza &c.

Hitherto we have escaped the prevailing epidemic fairly well. Four or five deaths a week the last month is the sum total of the mortality caused by it, and at present there are

no signs of any serious extension. The death-rates of both Manchester and Salford have of late been below our usual average. The carelessness of the public, or some sections of it, with regard to infection had an illustration last week, when a man was summoned and fined for taking the dead body of his child (who had died from scarlet fever), enclosed in a coffin, by passenger train from Manchester to Macclesfield, the coffin being placed in an ordinary third-class compartment.

Manchester, Feb. 16th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Newcastle Dispensary.

FROM the report read at the annual Court of Governors of the Newcastle Dispensary, the Mayor in the chair, it appeared that 8378 letter patients and 15,355 casuals had been treated during the past year. The financial state of the institution was satisfactory. The receipts amounted to £8200, and the ordinary expenditure to about £3000, so that there was a substantial balance in hand. The committee, having regard to the strong financial position of the institution, felt that they would be carrying out the wishes of the founders and aiding the recovery of the patients if provisions for establishing a convalescent home were made, or arrangements entered into so that patients could be sent to some such home. The Mayor suggested that, having regard to the size of the city, a dispensary might be placed at each end, which would relieve the patients and their friends, who at present had to travel a long way to the Central Dispensary.

North of England Microscopical Society.

At a meeting of this Society held last week in the Hancock Museum, Newcastle, Mr. R. Ellis, F.R.C.S. Ed., in the chair, Mr. G. E. Williamson, F.R.C.S., gave a demonstration of the methods of preparing animal tissues for the microscope microtomes of American and other designs capable of cutting with rapidity and accuracy to the ten-thousandth part of an inch in thickness. A portion of the retina of the human eye, having been embedded in paraffin, was thus cut. Mr. Williamson also showed practically how the paraffin and xylol method, besides supplying the requirements of a large class of students, could be modified to serve as a quick and reliable guide to the surgeon in the diagnosis of diseased tissue.

Malton Dispensary.

The annual meeting of the Malton Dispensary has been held, and the report showed that the institution was working very efficiently, and its benefits had been fully appreciated by the poor. A sum of £600, which was left by the late Mr. Beckett, had been invested, and there was a balance in hand on the year's working of £15 8s. Since the opening of the dispensary nearly 18,000 patients had been treated.

Newcastle Health Society.

Dr. Hume inaugurated the second session of the Newcastle Health Society on the 6th inst. by a lecture on the Human Foot and Foot Clothing. Dr. Hodgkin presided, and the theatre of the Literary and Philosophical Society was crowded. The complex and beautiful structure of the foot was illustrated by limelight views.

Influenza in the Northern Counties.

I think there is a general subsidence of the influenza epidemic in the Northern Counties, where its ravages have been very serious. The medical officer of the Northallerton sanitary authority has reported that it prevailed in the district during the whole of January, and has materially increased the death-rate, particularly amongst the aged. In the Normanby district of Middlesbrough the death-rate is still reported as exceptionally high. Dr. Glen states that this is not to be wondered at when the vast numbers of persons who were stricken with influenza is considered, the disease in many cases being complicated with some chest affection. Towards the end of last month he says there was a marked decrease in the number of cases of influenza, but several cases of measles were observed in the northern part of the district. In the Whitby district and various parts of North Yorkshire a grave form of pneumonia has been prevalent, and the medical practitioners have been fully occupied. I hear, however, that lately the attacks have been less numerous and not so severe.

Darlington: the Nursing Difficulty.

At a late meeting of the Darlington Guardians Dr. Drury stated that the greatest difficulty had been found in treating the poor and the class above the poor, owing to their ignorance of nursing. As showing the want of practical knowledge which prevailed, he instanced the use which had been made of the beef supplied to the poor for the purpose of making beef-tea. The liquid, he said, resembled water, whilst the meat, which had been boiled in large chunks, was put into a pie.

Berwick: the Improvement of Spittal.

A movement is on foot by the Berwick sanitary authority to improve the village of Spittal, the watering-place and suburb of Berwick. Spittal, which derives its name from a leper hospital founded here by Edward I., is a place of considerable natural attractions. It has already some good hotels and lodging-houses, and a mild chalybeate spring—the spa well, once in considerable repute in scorbutic and allied affections. It is proposed to publish the analysis of this spring and to borrow £1000 from the Local Government Board to replant the main street with trees and to improve the sewerage. In former times Spittal fishermen were much addicted to smuggling, and it was one of the most noted places on the coast for landing contraband goods. In the old houses were secret holes and nooks made to stow away a whole cargo. In some instances the soil underneath the kitchen floors was entirely removed to form places of concealment for kegs of brandy and gin and bales of tobacco.

I regret to hear that the accounts of Dr. Heath's health are not so satisfactory this week.

Newcastle-on-Tyne, Feb. 17th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal Edinburgh Hospital for Sick Children.

THE annual meeting of the contributors to this hospital was held on Feb. 12th. In the report submitted to the meeting it was pointed out that the distance from town of the building at present used was somewhat against patients finding their way to it, and that the dispensary work had been carried on at considerable disadvantage. The number of patients treated in the wards during the year was 571, the number at the dispensary 6054, and the number of vaccinations 111. The number of patients treated since the hospital had been instituted was 173,770. The income for the year was £5044, being a considerable increase over the preceding year, and the expenditure was £6047, which, however, included special outlay on their present premises. The legacies showed a considerable falling off. Reference was made to the negotiations with the Royal Infirmary; but as these had fallen through, the directors had decided to rebuild the hospital on the old site, and the architect had prepared plans which had been approved by the Board. They had been requested to confer again with the Royal Infirmary managers, and they would of course be glad to meet them, and to talk over the possibility of mutually satisfactory arrangements being made if practicable. Intimation had recently been received by the directors of several large benefactions; one of these was a gift of £10,000 from Lady Jane Dundas, in memory of her sister, Lady Caroline Charteris. Half that sum was to be expended under special arrangements on the new building, the design for which the donor has seen and approved, and the other half was to be devoted to the perpetual endowment of ten beds in the hospital.

Health of Edinburgh.

The mortality last week was 75, and the death-rate 15 per 1000. Diseases of the chest accounted for 30 deaths, and zymotic diseases for one. The intimations for the week were: Typhus fever 1, typhoid fever 1, diphtheria 3, scarlatina 18, and measles 92.

The Universities Commission.

The commissioners have just issued four ordinances dealing with the following: Regulations for degrees in medicine (Ordinance 16); regulations for degrees in arts (Ordinance 11); regulations for degrees in science (Ordinance 12);

and regulations as to examinations (Ordinance 13). The points of interest in these bearing upon the medical curriculum and examinations will be referred to fully next week.

Edinburgh Royal Infirmary Extension.

On Monday a conference took place between a deputation of the managers of the Royal Infirmary and the directors of the Sick Children's Hospital with reference to the proposed acquisition of the site of the latter for the extension of the Royal Infirmary. The agreement come to was that the managers of the Royal Infirmary should make a definite proposal to the directors of the Sick Children's Hospital with reference to the acquisition of the property.

Aberdeen Hospital for Sick Children.

The report for last year submitted at the annual meeting of the subscribers and friends of the Children's Hospital shows that during the year 555 patients were treated in the wards, as compared with 484 in 1890. Of the 555 patients, 346 were cured; 84 improved; 42 unfit; 31 died, and there were 50 in the wards on Dec. 31st. Of ophthalmic cases 94 were treated in the wards, and there were 43 out-patients. The dental operations during the year numbered 52. In the out-door department there were 757 cases treated. It is noted that of the fatal cases 6 died within twenty-four hours of admission. The convalescent cottage, known as the Eidda Home, was open from June 3rd to Oct. 30th, and during that time 47 children had the benefit of several weeks' stay in the country, and 9 more were received into Dyke Neuk Cottage—a convalescent home also situated on Deeside a few miles from the city, and under private management. The increased number of patients means a proportionately larger expenditure for the year, which was £2001 2*s.* 2*d.* as compared with £1717 8*s.* in 1890; and the accounts for the year show a deficit of £101 2*s.* 8*d.* At the end of 1890 the debt on the hospital was £1670 5*s.* 7*d.*; but during the year legacies and donations were received amounting to £2374 10*s.*, and the available portion of this sum has reduced the debt to £716 7*s.* 11*d.*

The late Dr. J. W. Hutchem.

In his report on the health of the city of Aberdeen, submitted to the Town Council on Monday, Dr. Hay says: "It is with very painful feelings that I allude to the death from influenza, during the month, of Dr. J. W. Hutchem, my medical assistant for the past three months at the hospital. Dr. Hutchem was greatly esteemed by myself, the matron, the nursing staff, and the patients, alike for his high personal qualities, his professional ability, and the faithfulness of his services."

Health of Aberdeen.

The death-rate continues high; that for the present month exceeds the average of the last ten years by nearly 30 per cent. For the last week it was over 29 per 1000. During the week five deaths from influenza were recorded.

Seizure of Unwholesome Food.

During the month of January the sanitary inspector seized as unfit for human food 17461b of beef, 381b. of mutton, 121b. o, potted meat, and 19461b. of fish. At the police-court, on Saturday, 13th inst., two farmers were each fined £5, with 16*s.* 3*d.* of expenses, for having in their possession or owning two parcels of beef which was intended for human food, and was unfit for such purpose.

Professor Grainger Stewart is now rapidly recovering from his attack of influenza, and is expected to be able shortly to resume his professional duties.

Feb. 16th.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

Royal College of Surgeons in Ireland: the New Schools of Surgery.

THE new schools which have been built in connection with the Royal College of Surgeons were formally opened by the president of the College, Mr. Croly, a few days since. The schools constitute a new wing at the rear of the College, and include a dissecting-room, a smaller dissecting-room for lady students, a chemical laboratory, and a lecture theatre. The School of Surgery of the College was established in the year 1790, and in the following year the Government gave a grant for its improvement. In 1811 a farther grant of £2000 was made by the Government for the same purpose. The school buildings were gradually enlarged, and in 1882 a sum of £3500 was expended by the College in farther improvements. In 1885 the school was opened to lady students, many of whom have since passed with distinction for the licence. In 1889 the Carmichael School of Medicine, which had been in existence from 1826, and the Ledwich School of Medicine, which was established in 1836, were amalgamated with the College of Surgeons School. This necessitated increased accommodation, and last year the College resolved upon the construction of the building, at a cost of £5000. The principal dissecting-room, which accommodates 400 students, is seventy-four feet in length, by sixty-four wide and about twenty-two in height. The roof, of which the central portion is higher and is glazed, is supported by metal columns and beams; it is composed of asphalted concrete, and is fireproof. The floor is of concrete asphalted, and is also fireproof. The ladies' dissecting-room is about thirty feet square. The chemical laboratory is sixty-four feet by twenty-eight. It is already filled with chemical appliances, and has been used in connexion with the chemical lectures during the last few days. Dissecting tables of teak extend round the walls of the principal dissecting-room, and the ladies' dissecting-room is also fitted with teak tables. All the rooms are provided with electric lamps, and are heated by a system of hot-water pipes. There is also a bone-room, in which specimens of human bones are preserved for purposes of study, and a lift extends through the rooms by means of which the subjects are raised from a cellar below, where they undergo a process of preparation before being used for dissection. Mr. H. Gray Croly, President, will give a banquet on Monday evening, March 14th, at the College, to celebrate the first biennial presidency of the College. His Excellency the Lord-Lieutenant has accepted Mr. Croly's invitation to be present.

Irish Dispensary Medical Officers.

A conference to consider the grievances of dispensary medical officers in Ireland was held on Wednesday at the College of Surgeons. Representatives of the Irish and British Medical Associations, the Irish Graduates' Association, and also delegates from various meetings held by Poor-law medical officers were present. The three chief requirements for the present medical officers of dispensaries would appear to be compulsory superannuation, increase of salaries, and some modification of the visiting ticket system.

Proposed Hospital for Consumption.

Opinions are divided as to the necessity for an institution for phthisical patients near Dublin. It is pointed out that to add another hospital to those already existing would be very unwise, and would add another tax on the charitable public, already overburdened with appeals. It is suggested that instead of a separate hospital for consumption being erected at an enormous expense, which would require several thousands of pounds annually to keep it up, additional wards might be erected in connexion with the Royal Hospital for Incurables, which could be carried out and endowed at a comparatively moderate expenditure. A meeting of the promoters will be held this week to consider the matter.

Green street Court-house.

The Lord Chief Justice last week, in addressing the Grand Juries of the City and County of Dublin, spoke in strong terms in reference to the insanitary condition of the court-house. He said he did not know who was responsible for this condition of things. If it was the Government who were to blame, it was a disgrace to them, and the same would apply to the Corporation. The place was pervaded by a mephitic atmosphere, and exhalations which proceeded from beneath the floor of the courthouse were pestiferous, and sometimes absolutely overpowering. His lordship said that if he did not find before the next Commission that some practical move had been taken to remedy the state of things, he would summon a meeting of the common law judges and take counsel with his brethren on the bench as to whether they could not go elsewhere. The disgraceful condition of this courthouse has on numerous occasions been referred to in these columns, but redress seems as far off as ever. If the Government, who are primarily to blame, would subscribe handsomely, the Corporation and the citizens would undoubtedly help to erect a proper courthouse in place of the present inconvenient and dangerous structure.

University of Dublin: Tercentenary.

It is contemplated to establish a graduates' memorial of the tercentenary, to take the shape of a building in which

the various College societies can be accommodated. A meeting of those interested in the movement took place on Tuesday, and was presided over by Lord Rosse, Chancellor of the University. Already some 6000 circulars have been issued to graduates of the University, both at home and abroad, and the replies already received have given convincing proof that a fund will be obtained which will be ample for the proposed project.

Health of Dublin for the Last Quarter of 1891.

During the December quarter the births registered in the Dublin Registration District numbered 2133, or 24·6 per 1000, and the deaths 2584, or 29·8 per 1000, being 2·4 above the average for the fourth quarter of the past ten years. Zymotic diseases caused 335 deaths, or 109 over the number for the preceding quarter, the increase in the mortality being principally due to the prevalence of enteric fever, which caused 105 deaths, being 54 in excess of the average for the corresponding quarter of the last ten years. There were only 4 deaths registered from typhus fever. Whooping-cough caused 48 deaths, influenza and its complications 32, measles and scarlatina 2 each, and diarrhœa and dysentery 83. To deaths from diseases of the respiratory system were due 626.

Ulster Eye, Ear, and Throat Hospital.

The twenty-first annual meeting was held on Feb. 15th, and from the report I learn that 1515 patients were treated during the year, of whom 179 were intern. The committee urge the need of extension of the premises, and state that, with £600 in addition to the £400 they have in hand, they could undertake the desired addition. Owing to the fact that in order to put the public and private departments of the hospital in the best condition a considerable sum of money has been spent, the debt has increased to £130 12*s.* 5*d.* The total receipts for the past year amounted to £542 15*s.* 9*d.*, and the total expenditure to £647 19*s.* 11*d.*, of which £91 8*s.* 11*d.* was for furnishing. In the medical report I gather that some fifty-two operations for cataract were performed in the past year without the loss of a single eye. Clinical instruction has been given to a class of students of the Belfast Medical School, in accordance with the regulations of the Royal University, and the most perfect scientific appliances are being provided for demonstration and instruction.

Belfast Hospitals.

On Feb. 15th Captain M'Calmont, M.P., asked the Chief Secretary in the House of Commons whether, in consideration of the fact that a sum of close upon £16,000 is voted annually by Parliament for the maintenance of hospitals in Dublin, he would be prepared to recommend that an annual grant should also be made to similar institutions in Belfast, which are of necessity supported entirely by voluntary contributions. In his reply, Mr. Jackson, M.P., said he was not aware of any proposal to make grants from public moneys to the hospitals in Belfast or any other cities of the United Kingdom. Nor did he think, if such a proposal was made, that it would meet with the approval of the House. It is felt in Belfast that Dublin has no special claim whatever to this grant. Belfast now pays a larger sum to the Imperial revenue than does Dublin, and the mere argument that custom or prescription gives a right will not stand in these days. It is also urged that Dublin has a metropolitan title. Then, again, in the question of population, Belfast is now as large; indeed, some authorities say it is larger than Dublin. In commerce it is far away the leading city of Ireland, and it can hardly be urged that the Dublin hospitals are, as compared with those in Belfast, entitled to be called metropolitan. It is quite evident that this subsidising of the Dublin hospitals out of the Imperial exchequer is an anomaly which will have to be done away with sooner or later.

Mr. Thomas George Stevens, L.R.C.P.I. &c., has been appointed Assistant Medical Superintendent of Dundrum Criminal Lunatic Asylum.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Treatment of Pneumonia following Influenza.

IN these days of influenza, in which disease pulmonary complications are so common, the opinion of such a competent therapeutist as M. Huchard on the treatment of these complications may be worthy of transcription. That authority (Soc. de Thérapeutique, Feb. 10th) reminded his audience that the pneumonia observed amongst sufferers from the prevailing epidemic assumed various types. In some, the pneumonic fever belongs to the ordinary fibrinous variety, the characteristic micro-organism being the pneumococcus. In another class of cases we meet with bastard pneumonia, in the non-rusty expectoration of which we find the streptococcus. This kind of pneumonia is apt to relapse more than once. Other varieties of pneumonia are those characterised by (*a*) rapid evolution with purulent expectoration; (*b*) pulmonary collapse, or "massive" congestion of the lung with gummy expectoration; (*c*) abundant subcrepitant râles without a souffle, death occurring from dyspnœa and adynamia. Empyema or pulmonary gangrene may be superadded, and bring about a fatal result. In all these forms the dominant factor is the state of nervous asthenia in which the patient is plunged, and, consequently, all modes of treatment should be directed less to combat the actual pulmonary lesion than to sustain the action of the heart, and, in a subsidiary degree, encourage the elimination of the toxines through the renal filter. This double object is attained by the administration of digitalis given from the very commencement concurrently with an exclusively milk diet. M. Huchard has for a long time discontinued the employment of the infusion of foxglove, preferring crystallised digitalin in a solution of 1 in 1000. Of this solution he administers forty or fifty drops (equal to one milligramme of the alkaloid) once a day for the first two days. Should the prostration be profound hypodermic injections of caffeine, ether, or camphor (in solution of 1 in 10 in sterilised olive oil), twice or oftener a day. If within a week a resumption of this digitalis treatment be indicated, half of the above dose is given. Intestinal and buccal antisepsis is also given a prominent place in the treatment, five or six *cachets* a day of fifty centigrammes each of benzonaphthol being relied on for the one, and a mouth-wash of corrosive sublimate for the other. Should the caffeine, ether, or camphor prove insufficient remedies for the asthenia, M. Huchard has recourse to subcutaneous injections of sulphate of strychnia two or three milligrammes a day. In all cases the treatment is completed by the daily exhibition of one or two teaspoonfuls of a mixture composed of equal parts of tincture of kola and tincture of coca, the vehicle employed being either a cup of hot milk or diluted curaçao.

Lady Students in Paris.

From a report just issued I learn that the number of ladies pursuing their studies at the various faculties of Paris has increased from 152 in the year 1890 to 252, the actual figures. An analysis of the nationality of these fair aspirants to academic honours tells us that at the Faculty of Medicine 18 are French, 6 English, 3 Roumanians, 2 Turks, 1 Greek, 1 American, and no less than 103 Russians. At the Faculty of Sciences there are 14 foreigners to 5 natives. At the Faculty of Letters, however, the French take their revenge, 82 out of 97 being *citoyennes* of the French Republic. Three ladies, all Russians, have graduated during the last year as Doctors of Medicine.

Erysipelas at a School.

It is not often that one hears nowadays of a school being evacuated on account of an epidemic of erysipelas. Such, however, has been the case recently at Vitry-le-François, where the pupils of the ladies' college have been sent to their respective homes from this cause. The *Progrès Médical* remarks very truly that such an occurrence as a serious outbreak of erysipelas should be an impossibility in these enlightened days.

Traumatic and Gastric Origin of Tachycardia.

Professor Le Dentu relates the following case in a recent number of the *Médecine Moderne*. A cabman, aged forty-nine years, fell off his box, and when picked up was found to have sustained an extensive scalp wound, with denudation of the skull. On the following day the patient had an attack of tachycardia (from 200 to 300 pulsations a minute), lasting about fifteen hours, the attack being preceded and followed by arhythmia and cardiac intermittence. There was only a trifling elevation of temperature (37·8° to 38·7° C.), and no cardio-vascular or cerebral signs or symptoms were observed. For some time previous to the accident the patient had suffered from palpitations, but there appears to be no reason to doubt that the above access was caused by the traumatism. Such a connexion

has not, to my knowledge, been pointed out before. With regard to the gastric origin of this distressing neurosis, a case recently treated by Dr. Barnard of Paris is very instructive. The patient was an American lady, aged about forty-two. She was found lying flat on her back, not daring to make the slightest movement. The cardiac pulsations were so rapid that their enumeration was almost impossible. There were no abnormal cardiac sounds, and the other organs were recognised to be healthy. The patient had suffered previously in the same way in her own country, and she had never derived benefit from any of the remedies, including digitalis, that had been administered, the attacks seeming to subside spontaneously. The remedies now successively tried were a belladonna plaster and an ice-bag over the heart, bromide of potassium, bismuth, and digitalis. Not the slightest benefit accruing, Dr. Barnard administered at 11 P.M. an emetic of twenty grains of ipecacuanha and one grain of tartar emetic. The vomiting brought the pulse down at once to 112, and the patient was left for the night, much relieved. On the following morning the pulse was 82, and the lady quite well. Dr. Barnard, I believe, was led to try an emetic in this case by a remark made by his patient to the effect that, in a previous attack occurring in London, she dated her recovery from the moment when, "in consequence of the nasty messes prescribed by her doctor," the stomach rebelled and expelled its contents.

Jacques Inaudi.

Poeta nascitur non fit. The feats of Jacques Inaudi at the Académie des Sciences last Monday week seem to prove that the above axiom is as applicable to arithmeticians as to poets. Inaudi is a native of Piedmont, twenty-four years old, and of short stature. The size of the head is rather below the normal standard, the forehead is very lofty and straight, and the facial angle well developed. That his calculating powers are of a very high order, and his memory something quite extraordinary, is proved by the following experiments performed before the assembled academicians. Facing the audience and consequently turning his back to the blackboard, M. Darboux writes on this latter the following figures: 4,123,547,238,445,523,831 and 1,248,126, 158,234,128,910, and, after having called them out, asks Inaudi to subtract the one from the other. Inaudi repeats the numbers quite correctly, closes his eyes firmly, and immediately answers correctly. M. Darboux then puts the following question: "What number is it whose square and cube added together equal 3600?" In less than two seconds Inaudi replies "15." M. Poincarré then gives the following problem: "Give the square of 4800, subtract one and divide by six." At the same time, M. Bertrand asks: "On what day of the week did March 11th, 1822, fall?" Inaudi replied immediately, "The 11th of March, 1822, was a Monday, and a person born on that day would have lived to-day, had he survived, so many hours, minutes, and seconds." (All these figures were found correct.) "The result of the calculation proposed by M. Poincarré is 1960." These astonishing feats of rapid calculation greatly surprised the scientific men present, and the Academy forthwith appointed a committee, composed of MM. Darboux, Poincarré, Charcot, Chauveau, and Tisserand, whose duty it will be to report on the mnemotechnic methods employed by this wonder of the nineteenth century. It is said that Inaudi can hardly read or write.

Paris, Feb. 17th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Treatment of Cancer.

IT is reported that several Berlin cancer patients have asked Professor Billroth of Vienna whether he would advise them to subject themselves to the treatment proposed by Professor Adamkiewicz of Cracow, and that Professor Billroth has answered that he has not yet seen any cancer patient cured by the treatment.

Rohrbeck's Disinfector.

A work which has been carried on for a long time past with great care and perseverance has now been finished. Its purpose was to clear up the numerous obscurities and contradictions that had come to light in the researches of various observers on sterilisation and disinfection. It was undertaken by Dr. Hermann Rohrbeck and H. C. J. Duncker, a veterinary surgeon in the service of this city. Their first endeavour was to find sure aids and means of control for the practical execution of the requirements that the articles to be disinfected must be interpenetrated by saturated steam of 100° C. It was possible to ascertain the heat in the inmost parts by means of electric contact-pyrometers, but the difficulty has hitherto been to determine the moisture there. Dr. Rohrbeck proved in 1889 that different kinds of steam possess different disinfecting powers, and that it is necessary entirely to remove the air from the articles to be disinfected if the steam is to penetrate them thoroughly. He constructed a disinfector which warrants the production of saturated steam and the complete elimination of the air. Duncker afterwards invented new electric pyrometers and hygrometers, which enabled one to observe the advance of the steam inwards step by step. It deserves special mention that the condensation of the steam in Rohrbeck's apparatus, with a view to removing the air, considerably increases the temperature of the articles to be disinfected.

Professor Virchow.

On the 9th inst. Professor Virchow addressed the following to one or more of the Berlin papers: "Cincinnati papers publish lengthy advertisements, according to which the 'great German physician,' Dr. Karl Virchow Schick, has arrived there from Berlin and opened his consultations. It is alleged that he has made important discoveries in the germinal treatment of chronic diseases, and that his prescription is used by 806 doctors in Europe. Permit me to remark that, according to the official lists, there is not and never has been a physician of this name in Berlin or in Prussia, and that such a one from the other states of the German Empire is also not known. It is hoped that this notice will suffice to induce the American papers to oppose the tactics of the gentleman in question."

Professor Franz König of Göttingen, an eminent German surgeons, celebrates his sixtieth birthday to-day.

Berlin, Feb. 16th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Coagulation of the Blood.

THE experiments of Dr. Ernest Freund of Vienna on the conditions which prevent the coagulation of the blood have been from time to time reported in the pages of THE LANCET. He has found that the non-coagulation of the blood in the living bloodvessels is due to the physical action of the walls of the vessel, and he has been able to preserve shed blood from coagulating for many hours or even days by contact with oily liquids and fatty matters, such as vaseline or oil. The blood could also be kept liquid in animal membranes or parchment paper tubes soaked in physiological solutions of common salt (½ per mil.). From these experiments he has come to the conclusion that the physical condition for coagulating the blood is adhesion. In his paper on "The Formation of the Phosphate of Lime as a cause of Coagulation," Dr. Freund has pointed out that coagulation of the blood is due to phosphate of lime being formed and becoming insoluble. His views have been confirmed to a great extent by Green, Ringer, Sainsbury, Haycraft, Pekel, and others. It has also been found by Arthus and Pagès that the blood remains liquid if the lime salts are made insoluble by the addition of a small quantity of oxalate of ammonium, and that the coagulation is then produced again by adding a solution of calcium chloride. These latter facts have been made use of by Dr. Wright in his recent experiments on blood transfusion. But while in the experiments of Arthus and Pagès and Wright the blood remained liquid on account of the formation of an insoluble lime salt, Dr. Freund has now found a substance which prevents the coagulation of the blood by keeping the phosphate of lime dissolved. By receiving the blood into a vessel containing small quantities of citrate of ammonium or of citrate of sodium it loses its coagulability, as has been shown by experiments made by Dr. Freund at a recent meeting of the Vienna Society of Physicians. In this case the phosphate of lime is kept dissolved by the action of the citric salt. Solutions of from 0·2 to 0·4 per cent. were used. By these experiments a new direction seems to be given for

working out practical problems like that of blood transfusion and of hæmostatic action.

Influenza.

According to the last official return the influenza is decreasing in Vienna, only 118 cases having been notified during the week from Feb. 7th to 13th. It is to be noted that the disease was raging more among the wealthy people than the poor.

Vienna, Feb. 16th.

THE SERVICES.

As we announced some time ago, Surgeon-Colonel Bradshaw will, on promotion, succeed to the post of Principal Medical Officer of Her Majesty's Forces in India on the retirement of Surgeon-Major-General Thomson.

It is rumoured that Surgeon-Major F. W. Trevor is likely to be the successor of Surgeon-Major Rogers as Principal Medical Officer of the Egyptian Army. The latter officer becomes the head of the Egyptian Sanitary Service, a post vacated by Surgeon-Major Green Pasha.

Surgeon-Lieutenant-Colonel H. Comerford has been appointed Principal Medical Officer on the staff at the Curragh.

By the retirement of Brigade-Surgeon-Lieutenant-Colonel R. Collins the medical staff loses a very valuable officer of excellent judgment, common sense, and administrative capacity. Previously to joining the Woolwich garrison this officer was stationed at Gibraltar, where he acquired considerable reputation by his sound professional knowledge, kindly disposition, and readiness to help everyone.

ARMY MEDICAL STAFF.—The undermentioned Surgeons on probation to be Surgeon-Lieutenants (dated Jan. 30th, 1892):—Edgar Montagu Pilcher, M.B., Henry Percival Johnson, William George Beyts, Harold Arthur Stalkartt, M.B., Henry Nason Dunn, M.B., Samuel Henry Withers, M.B., Edwd. Mandsley Morphew, Ernest Chester Anderson, Nicholas Tyacke, Robert Hughtrede Edward Holt, Lionel Arthur Mitchell, M.B., Charles Christie Fleming, M.B., John Hennessy, M.B., Claude Buist Martin, M.B., George Johnstone Buchanan, M.B., Charles Bunbury Lawson, M.B., George Edgar Hughes, Joseph Francis Mary Kelly, M.B., Gilbert Stewart Crawford, and John Donald Alexander, M.B.

BENGAL MEDICAL ESTABLISHMENT. — Surgeon-Lieutenant-Colonel John Burke Gaffney (dated Oct. 18th, 1891), and Surgeon-Lieutenant-Colonel Woodforde Finden (dated Nov. 2nd, 1891), to be Brigade-Surgeon-Lieutenant-Colonels.

NAVAL MEDICAL SERVICE. — The following appointment has been made at the Admiralty:—Surgeon William Spry to the *Victory* (dated Feb. 22nd, 1892).

VOLUNTEER CORPS.—*Artillery:* 1st Dorsetshire (Southern Division, Royal Artillery): Surgeon-Lieutenant J. R. Philpots resigns his commission (dated Feb. 13th, 1892).—2nd Kent: Surgeon-Captain F. Smith to be Surgeon-Major (dated Feb. 13th, 1892).—*Rifle:* 2nd (Renfrewshire) Volunteer Battalion, Princess Louise's (Argyll and Sutherland Highlanders), Surgeon-Lieutenant M. H. Taylor to be Surgeon-Captain (dated Feb. 13th, 1892).

Obituary.

PROFESSOR ALEXANDER LUMNITZER, M.D.

WE regret to have to chronicle the death of Dr. Lumnitzer, Professor of Surgery at the University of Budapest, and since 1885 a life member of the Upper House of the Hungarian Parliament. Professor Lumnitzer, the most esteemed and popular surgeon in Hungary, was born in 1821 at Kapuvár, in the county of Sofron, where his father was the superintending manager of the domains of Prince Esterhazy; his grandfather was a renowned botanist; the late Dr. Mérei, whom some may still remember as a successful physician and founder of the Children's Hospital at Manchester, was Lumnitzer's maternal uncle. After finishing his preliminary education in Pozsony and Köszeg, and devoting a good deal of attention to classical and modern languages, he pursued his professional studies at Budapest and in Vienna, and graduated at both places in 1844 and 1846 respectively. At Budapest he was assistant to Professor Balassa, and at Vienna to Professor Schuh. Lumnitzer now took the opportunity of visiting foreign universities and hospitals, particularly those of Paris, London, and Zurich. When in Paris he attended the lectures and cliniques of Velpeau, Ricord, Malgaigne, and others. During the Hungarian war in 1878–79 Dr. Lumnitzer served on the staff of General Görgey as director-in-chief of the field hospitals. After the Russian intervention and the capitulation of Világos, Dr. Lumnitzer, by way of punishment, was enrolled as a subordinate attendant on the sick at an Austrian military hospital, in which degrading position he was kept till the fall of Field-Marshal Haynau. In 1861 Lumnitzer was appointed second surgeon to the Rochus Hospital at Budapest, and in 1864 was promoted to be chief surgeon. He again found time to visit the principal schools of surgery on the Continent and in England. In 1872 he was nominated Professor Extraordinary and in 1880 Professor Ordinary of Operative Surgery at the University, which post he filled with so much credit and usefulness till his death. Distinctions began now to shower upon him. He was a member, afterwards Secretary, Vice-president, and President of the Royal Medico-Chirurgical Society of Budapest. In 1866 he obtained the Knighthood of the Iron Crown; in 1878 was made President of the National Board of Health, and appointed a Crown Councillor. In 1869 he was elected chief physician of the city of Budapest, and in 1878 he represented Hungary at the Sanitary Congress in Paris. In 1885 his sovereign conferred upon Dr. Lumnitzer the dignity of Member of the House of Magnates. Lumnitzer was an easy writer, a fluent speaker, and the author of valuable works and many professional treatises. The introduction of antiseptic surgery in Budapest owes much to him; he tried also experiments with Koch's method, and his report on that subject is his last contribution to clinical surgery. Lumnitzer was a great and skilful surgeon. The new generation of Hungarian medical men are his pupils; on them he never ceased to impress the importance of thorough work, and that without well-grounded knowledge there was no hope of future usefulness and success. In clinical instruction he called particular attention to the minutest details, and despised show and superficiality; in his strict conscientiousness he would point out his own mistakes, and discuss the difficulties which led to errors of diagnosis, and marked out the way in which they should be avoided. By his sympathetic, gentle, and genial nature, ever ready to assist with advice and otherwise, he secured for himself the universal love and esteem of his pupils and professional brethren, as well as the confidence of his patients. He died on the 30th ult., in the seventy-first year of his age, of phthisis, aggravated by a long-standing induration of part of the right lung, the result of pneumonia. He was buried beside his son-in-law, the late Dr. Géza Antal, amidst every manifestation of sincere sympathy and the sorrow of his many friends and the public.

FOOTBALL CASUALTIES. — On Saturday, in the Scottish League match, Rangers against Vale of Leven, the Vale of Leven centre forward sustained a fracture of his clavicle.—On the same day, in a match at Caversham, near Reading, a player of the Newbury Reserves sustained a compound fracture of the left leg, and was conveyed to the hospital; also, on the same day, during a game between the White Lane (Chapeltown) and Carhouse (Rotherham) Clubs, a young man met with serious internal injuries. Medical assistance was obtained, when it was found he was suffering from "rupture of the intestines," and he died the following day.—On the same day a young man, in a match between Werneth A. and Oldham Horners, was kicked in the abdomen. Medical aid was procured, but death ensued on the following day.—On the same day a youth, in a game at Tunbridge Wells between the St. John's Team and the Excelsiors, received a serious injury to the abdomen. Medical assistance was obtained, when it was found he had sustained a "severe contusion of the bowel on the right side, a laceration of the kidney; acute peritonitis following." He died on the following Friday.—On Monday, whilst playing against the Wolverhampton Wanderers, in a match at Oxford, a player fell and broke his arm.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen, having passed the necessary examinations, have been admitted by the two Colleges diplomates in Public Health:—

Adams, Percy Targett, M.R.C.S., Ophthalmic Hospital, Maidstone.
Bryett, Lewis T. Fraser, M.B. Lond., L.R.C.P. Lond., M.R.C.S., Girdler's-road, West Kensington.
Crosskey, Roger, L.R.C.P. Lond., M.R.C.S., Shortlands, Kent.
Daniel, W. Patrick Taylour, L.R.C.P., M.R.C.S., Robert st., N.W.
Duthie, R. Campbell, M.B. Aberd., Stonor-road, West Kensington.
Elliot, Andrew, M.B. Edin., Edinburgh.
Greenwood, G. Spencer, L.R.C.P. Lond., M.R.C.S., Ossett, Yorkshire.
Hamerton, George Albert, M.D. Brux., L.R.C.P. Lond., M.R.C.S., Southampton-street, Strand.
Johns, John Francis, M.B. Durh., L.R.C.P. Lond., M.R.C.S., Southampton.
Macnamara, Hugh Winckworth (Surg. R.N.), L.R.C.P. Lond., M.R.C.S., Chatham.
Marsh, Thomas Alfred Perry (Surg.-Capt. Army), L.R.C.P. Lond., M.R.C.S., Aldershot.
Perry, Allan (Surg.-Capt. Army), M.R.C.S., the Guards' Hospital.
Stott, Hugh, L.R.C.P. Lond., M.R.C.S., Colney Hatch.
Tyrell, Walter Guy Beauchamp, L.R.C.P. Lond., M.R.C.S., Great Malvern.
Westcott, William Wynn, M.B. Lond., M.R.C.S., Camden-road, N.
Wood, W. Edmund, M.B. Lond., M.R.C.S., Dulwich.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, in addition to those mentioned in our issue of the 6th inst. as having obtained the L.R.C.P., having passed the necessary examinations, and having conformed to the by-laws and regulations, were, at the ordinary meeting of the Council on the 11th inst., admitted Members of the College:—

Boyes, William Isaac, M.B. Melb., Endsleigh-gardens.
Gregerson, William Jens, M.B. Melb., Endsleigh-gardens.
Phillips, Alfred Stanbury, L.S.A., Stonehouse, Devon.

UNIVERSITY OF LONDON.—The following candidates have passed the Intermediate Examination in Medicine:—

First Division.—Harold Budgett Meakin, St. Bartholomew's Hospital; William Thomas Pugh, Middlesex Hospital.
Second Division.—Evelyn Geo. B. Adams, St. Bartholomew's Hospital; Lizzie Bennett, London School of Medicine for Women; Cecil Edward Carpmael, Guy's Hospital; Alice Mary Corthorn, London School of Medicine for Women; Percival Clennell Fenwick, St. Thomas's Hospital; John William Haines, St. Bartholomew's Hospital; Arthur Cecil Hovenden, Guy's Hospital; Gerald Stanley Hovenden, Guy's Hospital; W. David Jones, University College; Reginald Gower Kirton, London Hospital; Chas. Harris Langford, St. Bartholomew's Hospital; Antony Alexander Martin, St. Mary's Hospital; Alfred Miller, Guy's Hospital; Thomas G. Nicholson, B.Sc., St. Thomas's Hospital; Leonard Arthur Parry, Guy's Hospital; Cecil David Dale Roberts, Queen's College, Birmingham; Arthur Stanley, St. Mary's Hospital; Thomas Harold Woodfield, St. Bartholomew's Hospital.

ROYAL COLLEGE OF SURGEONS IN IRELAND: FELLOWSHIP EXAMINATION.—The following gentleman, having passed the necessary examination, has been admitted a Fellow of the College:—

William Deane, L.R.C.S.I., 1879, Surgeon-Captain, Indian Medical Service.

THE *Surrey Advertiser* publishes the following, which may have interest for athletic members of the profession. "At Guildford a few days ago, just before the commencement of the County match between Surrey and Middlesex, a boy was run over by a cart near the football field, with the result that his leg was fractured near the thigh. The Surrey player, Mr. J. J. Knox, who is a doctor by profession, was near at hand, and he skilfully set the injured limb, the unfortunate youth subsequently being conveyed on the police ambulance to the Royal Surrey County Hospital. Mr. Knox is assistant to Dr. Skimming, of East Molesey."

HUNTERIAN SOCIETY.—The following gentlemen have been elected office bearers for the ensuing session:—President: Frederick Gordon Brown. Vice-Presidents: Thos. E. Bowkett, J. Dundas Grant, M.D., C. J. Symonds, M.S., and R. G. Tatham. Treasurer: F. Charlewood Turner, M.D. Trustees: H. I. Fotherby, M.D., and F. M. Corner. Librarian: Arthur T. Davies, M.D. Orator: John S. E. Cotman, M.R.C.P. Ed. Secretaries: John Poland and R. Hingston Fox, M.D. Council: S. H. Appleford, M.D., H. W. Denton Cardew, Sir Andrew Clark, Bart., M.D., T. Rowing Fendick, J. Langton Hewer, M.D., T. Mark Hovell, Francis R. Humphreys, Stephen Mackenzie, M.D., T. Horrocks Openshaw, M.S., Reginald J. Ryle, M.B., F. J. Smith, M.D., and Henry J. Thorp.

THE CITY LYING-IN HOSPITAL, CITY-ROAD.—The annual meeting was held at the hospital last week. In the past year 455 in-patients had been treated, and 1555 out-patients received the benefits of the charity. The balance sheet showed a deficiency of £161.

ROYAL METEOROLOGICAL SOCIETY.—The usual monthly meeting of this Society was held on Wednesday evening, the 17th inst., at the Institution of Civil Engineers, 25, Great George street, Westminster, Dr. C. Theodore Williams in the chair. The papers read included one by the Hon. Rollo Russell, M.A., on "The Untenability of Atmospheric Hypothesis of Epidemics," and another by Mr. H. Harris on "The Atmospheric Origin of Influenza Epidemics."

THE ADELAIDE CHILDREN'S HOSPITAL.—His Excellency the governor, Lord Kintore, presided at the annual meeting held on Oct. 26th last, at the institution, North Adelaide. The record of the past year's work reflected great credit upon the management. The hospital contains four general wards, two special wards, an ophthalmic ward, and a contagious ward. Accommodation is provided for forty-two patients, and usually the whole of the cots are occupied. A new building for the treatment of contagious diseases is urgently required. The facilities which the institution offers to those wishing to undertake the duties of nursing are much appreciated by the public. The cash statement showed a balance at the banker's of £1240 5*s.* 10*d.* The endowment fund now stands at a total of £2995 11*s.* 6*d.*

PRESENTATIONS.—Mr. C. M. Brady of Wigan has been the recipient of a handsome case of cutlery from his professional brethren on the occasion of his marriage. The case bore the following inscription:—"Presented to C. M. Brady, Esq., by a few of his medical friends on the occasion of his marriage, Feb. 16th, 1892."—The nurses of University College Hospital, on Feb. 11th, presented the secretary, Mr. Newton H. Nixon, with a handsomely fitted luncheon basket on the occasion of his birthday. We understand that the idea originated with the nurses whilst returning from their last summer trip to Richmond, annually organised by Mr. Nixon.—Mr. H. E. Dixon, L.R.C.P. Lond., M.R.C.S., has been presented by his friends, on his leaving Abingdon, with a valuable gold watch, bearing an appropriate inscription. At a meeting of the Society of Medical Officers of Health, held on Feb. 15th last at 20, Hanover-square, W., a handsome tea and coffee service was presented to Samuel Robert Lovett, L.R.C.P., medical officer of health for the district of St. Giles', London, by the Society of Medical Officers of Health, in acknowledgment of his many years of devoted services as treasurer of the Society.

ÆSCULAPIUS LODGE, No. 2410.—An ordinary meeting of this lodge took place at the Café Royal, Regent-street, on Wednesday, the 10th inst. A large number of members sent apologies for their absence in consequence of excess of professional work. The following officers, members, and visitors were present:—Bros. J. Brindley James, P.M., W.M., Thomas Dutton, M.D., P.M., as I.P.M. and secretary; Deputy Inspector-General Matthew Coates, M.D., R.M., P.M., as S.W.; Deputy Inspector-General Belgrave Ninnis, M.D., R.M., P.M., J.W.; Jacob Pickett, M.D., S.D.; George Crawford Thomson, M.B., J.D.; Anthony Nutt, I.G.; E. Henry Ezard, M.B., Org.; N. E. Yorke Davies. Visitors: Bros. Alfred Heald, P.M., No. 163; A. J. Phillips, No. 463; W. Molesworth St. Aubyn, No. 2369; and C. M. Simpson, M.D., No. 1056. Bros. Herbert G. Blackmore, Lewis Lewis, Montague Cheale, Frank Reid, and Clifford Luxmore Drew, M.B., made further progress in masonry, the ceremony being performed in an able manner by the W.M. Bro. Surgeon-Major William G. Black, F.R.C.S. Ed., M.R.C.S. Eng., was elected a joining member. After the routine business was concluded the brethren sat down to a capital banquet. In the after-dinner speech the W.M. alluded, in most feeling terms, to the much-lamented death of the R.W., Bro. Prince Albert Victor, Duke of Clarence and Avondale, Prov. Grand Master of Berkshire stating it was only two months ago at that festive board he alluded to the happy event of the Prince's engagement to Princess May of Teck. The sad loss masonry had also experienced by the untimely death of Bro. Colonel Shadwell Clerke, Grand Secretary, who was an hon. member of the Æsculapius Lodge, and who only last October consecrated the lodge, was also mentioned.

VIENNA HOSPITAL FOR CONSUMPTION.—Baron Albert de Rothschild has forwarded a donation of 100,000fl. to the society interested in promoting the above hospital.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION, VENTNOR.—The Queen has become an annual subscriber of £10 to the funds of the hospital, which has also been honoured by a visit from Her Majesty.

WIGAN MEDICAL SOCIETY.—The following have been elected office-bearers for 1892:—President: J. B. Stuart, Esq., J.P., F.R.C.S. Ed. Committee: C. M. Brady, ex-president, W. C. Barnish, R. Cowan, G. H. Monks, jun., J. A. Marsden, and M. Benson. Treasurer: G. H. Monks, jun. Hon. Secretary: W. Berry, F.R.C.S.I.

SOCIETY OF ARTS.—At the meeting of the Indian Section of the Society on Thursday afternoon, March 3rd, Surgeon-General Sir W. J. Moore, K.C.J.E., will read a paper on Indian Sanitation and the International Congress of Hygiene. The chair will be taken at 4.30 P.M. by Sir Owen Tudor Burne, K.C.S.I., C.I.E., a leading member of the Indian Committee of the Congress. Sir Douglas Galton and other authorities will take part in the discussion.

SUICIDE OF A LIVERPOOL MEDICAL PRACTITIONER.—Shortly after twelve o'clock on Saturday last Mr. Arnold, L.R.C.P., F.R.C.S.I., of Park-road, Liverpool, was found dead in his surgery, and beside him was a vessel which had contained poison. The deceased gentleman was medical adviser to the police at the Essex-street Bridewell. He had been suffering from insomnia and depression following an attack of influenza.

LONDON FEVER HOSPITAL.—A very satisfactory report of the past year's work of this institution has just been circulated. During the year 515 patients were admitted, and, as in previous years since 1883, there was no case of typhus fever, and not a single patient admitted for one kind of fever contracted another while in the hospital. Scarlet fever had furnished the great majority of cases, and in these the mortality did not reach 1 per cent., as against 5 per cent. for the whole metropolis.

THE NEW INFIRMARY, SOUTHPORT.—The annual report for the year 1891 is just issued. There has been a considerable increase of in-patients treated during the year, and a decrease in the number of out-patients. The statement of receipts and expenditure shows a small deficit balance. An energetic effort is being made to celebrate the present year—Southport's centenary—by the erection of a new infirmary, the prospects in respect to which were very encouraging. The Scarisbrick trustees had, subject to the sanction of the Court of Chancery, promised a site of five acres in the Scarisbrick New-road, estimated to be worth £4840, while the fund for the erection of the proposed building now amounted to £7472.

BEQUESTS AND DONATIONS TO HOSPITALS.—The late Mr. Walter Davidson, of Cairnie, Fifeshire, bequeathed £1000 to the Edinburgh Royal Infirmary.—By the death of Mrs. Joseph Cole, of Pedmore, a bequest of £500, left by her late husband, becomes payable to the Stourbridge Dispensary, and Mrs. Cole also bequeathed £100 each to the same Dispensary and the Guest Hospital, Dudley.—The late Mr. John Palmer Stocker, of Oxford-terrace, Hyde-park, London, bequeathed £200 to the City of London Truss Society, £100 each to the St. Mary's Hospital, Paddington, the Hospital for Sick Children, Great Ormond-street, and the Hospital for Cancer, Brompton.—Mr. John Coppin, late of Bingfield House, Northumberland, bequeathed £500 each to the Newcastle Convalescent Society and the National Hospital for Consumption, Ventnor.—The late Mr. Charles H. Wagner, of the Hagley-road, Edgbaston, bequeathed £500 each to the General Hospital and the Queen's Hospital, £300 to the General Dispensary, £100 to the Children's Hospital, Birmingham, and £50 to the German Hospital, Dalston.—The late Mr. Samuel Maples, of Nottingham, bequeathed £1000 each to the General Hospital, Nottingham, the Nottingham General Dispensary, and the Free Hospital for Sick Children, Nottingham.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at Midnight on February 16th, 1892.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	189	57	—	29	..	275	442
North-Western Hospital	198	32	..	13	..	243	411
Western ,,	102	20	..	10	3	135	224
South-Western ,,	177	43	..	14	1	235	350
South-Eastern ,,	198	13	1	37	2	251	424
Northern ,,	328	15	—	7	...	350	480
Totals	1192	180	1	110	6	1489	2331

SMALL-POX.—*Atlas* hospital ship, 9.

MEDICAL NOTES IN PARLIAMENT.

The Albert University.

IN the House of Commons on Monday last Mr. Roby asked the Vice-President of the Committee of Council on Education whether the Charter of the proposed teaching university had been reconsidered, and when it would be laid on the table of the House. In reply, Sir W. Hart-Dyke said that the Charter was practically settled, and would be laid on the table during the week.

Insurance of Children.

In reply to Colonel Dawnay, the First Lord of the Treasury feared that it would not be possible for the Government to introduce a measure during this session to amend and regulate the laws relating to the insurance of children.

Foot-and-Mouth Disease in Kent.

Referring to newspaper reports that this disease had spread to Kent, Mr. Chaplin confirmed the truth of the statements, and stated that from inquiries he had ascertained that the outbreak had occurred at Minster in the island of Sheppey, and an order had been issued prohibiting the removal of animals from that district, and cutting it off from other parts of the country.

Hours of Railway Servants.

In the House of Commons on Tuesday, the 16th inst., Mr. Akers-Douglas moved: "That the Select Committee be reappointed to inquire whether, and, if so, in what way, the hours worked by railway servants should be restricted by legislation; that the Committee do consist of twenty-six members; that the following be members of the Committee—Sir Michael Hicks-Beach, Mr. Channing, Mr. Radcliffe Cooke, Mr. Crawford, Baron de Worms, Mr. Alfred Gathorne-Hardy, Mr. Herbert Gladstone, Mr. Heneage, Mr. Howorth, Mr. M'Innes, Mr. MacNeill, Mr. Walter M'Laren, Mr. Maguire, Sir Herbert Maxwell, Mr. Milvain, Mr. Muntz, Mr. Murdoch, Sir Joseph Pease, Mr. Pickard, Sir Edward Reed, Sir Albert Rollit, Mr. Somervell, Sir George Trevelyan, Sir Henry Tyler, Mr. Vernon, and Mr. Johns Wilson; that the Committee have power to send for persons, papers, and records; that five be the quorum." The motion was agreed to.

The International Sanitary Conference at Venice.

In the House of Commons, on Thursday, Dr. Farquharson asked the Under Secretary of State for Foreign Affairs whether the draft of the protocol submitted on behalf of England to the International Sanitary Conference at Venice, which had to be withdrawn in favour of propositions submitted by the French delegates, was drawn with the assent and aid of the Medical Department of the Local Government Board, or of any other competent official medical advisers of the Government.—Mr. J. W. Lowther replied that the protocol referred to did not contain any new medical regulations or proposals on questions of hygiene, and it was not therefore necessary to consult the medical advisers of the Local Government Board upon it. The protocol was not withdrawn as stated in the question. The proposals submitted by the French delegates were submitted as amendments to the protocol. All the departments of Her Majesty's Government interested were consulted in the preparation of the instructions to the British delegates.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BISHOP, T. H., M.R.C.S. Edin., has been appointed House Surgeon to the Royal Portsmouth Hospital, vice John Watson, resigned.

BOND, CHARLES K., L.R.C.P. Lond., M.R.C.S., D.P.H., has been appointed Medical Superintendent of the Bradford Corporation Fever Hospital.

BRYANT, J. H., M.D., B.S. Lond., has been appointed Medical Registrar and Demonstrator of Practical Medicine to Guy's Hospital.

BULLAR, J. F., M.B., F.R.C.S., has been reappointed Honorary Medical Officer to the Hampshire Nurses' Institute.

DE BUTTS, STANLEY B., M.R.C.S., L.R.C.P., has been appointed Inspecting Medical Officer to the Army and Navy Cooperative Society, Westminster, vice Surgeon-General Laing, deceased.

GUNTHER, THEODORE, M.D Tubingen, L.R.C.P. Lond., has been reappointed Medical Officer of Health for Teddington.

HALPIN, J. E., L.R.C.S.I., L. and L.M. K.Q.C.P.I., has been appointed Medical Officer to the Fifth District, Mansfield Union, vice H. Parry Jones.

JAMES, L. L., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of the Workhouse, Rochford Union.

JOYNT, H. NOBLE, M.A., M.D., Dipl. State Med. Dubl., has been appointed to a Colonial Surgeoncy in Fiji.

LITTLETON, P. R., M.R.C.S., has been reappointed Medical Officer of Health for the Ashbourne Rural and Urban Sanitary Districts.

MACNABB, L. A., M.B., C.M. Durh., has been appointed Medical Officer to the South Shields Workhouse, vice Pope, resigned.

SELLERS, A. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Thornhill and Whitley Sanitary Districts of the Dewsbury Union.

SIMMONS, W. WICKHAM, B.A., M.B., has been reappointed Resident Medical Officer to the City of London Hospital for Diseases of the Chest, Victoria-park, vice Dr. Chaplin, resigned.

TENCH, MONTAGUE, M.D. Brux., M.R.C.S., L.R.C.P., L.S.A., has been appointed Medical Officer and Public Vaccinator to the High Exeter District of the Dunmow Union.

VERRALL, THOS. J., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Consulting Surgeon to the Brighton, Hove, and Preston Provident Dispensary.

VICKERS, C. WM., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health for the Paignton Urban Sanitary District, vice Mudge, deceased.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BURTON MEDICAL ASSOCIATION.—Dispenser. (Apply to Mr. A. Blant, Ebenezer, Shobnell-road, Burton-on-Trent.)

CANCER HOSPITAL (FREE), Fulham-road, S.W.—Two Surgeons.

CENTRAL LONDON OPHTHALMIC HOSPITAL, 238A, Gray's-inn-road, W.C.—House Surgeon.

CENTRAL LONDON SICK ASYLUM DISTRICT.—Assistant Medical Officer and Dispenser at the Asylum, Cleveland-street. Salary £100 per annum, with board and residence.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Assistant Physician. (Apply to the Secretary. Office, 24, Finsbury-circus, E.C.)

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer. Salary (which will be a progressive one) commences at £100 a year, with furnished apartments, board, washing, and attendance.

DENBIGHSHIRE INFIRMARY, Denbigh.—House Surgeon. Salary to commence at £85 per annum, with board, residence, and washing in the house. (At end of year a gratuity of £15 is usually given by the committee.)

DENTAL HOSPITAL OF LONDON AND LONDON SCHOOL OF DENTAL SURGERY, Leicester-square.—Demonstrator.

DISTRICT INFIRMARY, Ashton-under-Lyne.—Assistant House Surgeon and Dispenser. Salary £50 per annum, with board and lodging.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, W.—Vacancy on the Honorary Medical Staff.

HOXTON HOUSE ASYLUM, London, N.—Assistant Medical Officer. Salary £120 a year, rising £10 a year to £160, with board, lodging, and washing.

HUDDERSFIELD INFIRMARY.—Senior Assistant House Surgeon. Salary £50 per annum, with board, lodging, and washing.

HUDDERSFIELD INFIRMARY.—Junior House Surgeon. Salary £40 per annum, with board, lodging, and washing.

LINCOLN COUNTY HOSPITAL, Lincoln.—House Surgeon. Salary £100 per annum, with board, lodging, and washing.

LINCOLN ODDFELLOWS' MEDICAL INSTITUTE.—Resident Medical Officer. Salary £200, with Midwifery and Vaccination fees. House free, with allowance for coal, gas, rates, two Assistants, and Dispenser. (Apply to Mr. Coulson, 12, North-parade, Lincoln.)

LINCOLN ODDFELLOWS' MEDICAL INSTITUTE.—Doubly Qualified Assistant. Salary £120 per annum, out-door. (Apply to Mr. Coulson, 12, North-parade, Lincoln.)

LIVERPOOL DISPENSARIES.—Assistant Surgeon. Salary £80 per annum, with apartments, board, and attendance. (Apply to the Secretary, Leith Offices, 34, Moorfields, Liverpool.)

LONDON HOSPITAL, Whitechapel, E.—Assistant Surgeon.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Physician to in-patients.

LONDON TEMPERANCE HOSPITAL, Hamsptead-road, N.W.—Assistant Physician.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—House Surgeon for six months. Salary at the rate of 50 guineas per annum, with residence in the hospital, board, and washing.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Junior House Surgeon for six months. Residence in the hospital, board, and washing are provided, and an honorarium of 5 guineas at the expiration of term of appointment.

MANCHESTER ROYAL INFIRMARY (MONSALL FEVER HOSPITAL).—Assistant Medical Officer at Monsall Fever Hospital, for twelve months. Salary £100 per annum, with board and residence.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Two Assistant Surgeons.

MIDDLESEX HOSPITAL, W.—Anæsthetist for twelve months. Salary £100.

MONTROSE ROYAL LUNATIC ASYLUM.—Junior Assistant Medical Officer. Salary £80, with board &c.

NEWPORT AND COUNTY INFIRMARY, Newport, Mon.—House Surgeon. Salary £100 per annum, with board and residence (no stimulants provided).

NORTHUMBERLAND COUNTY ASYLUM, Morpeth.—Clinical Clerk. Board and residence provided.

ORMSKIRK UNION RURAL SANITARY AUTHORITY.—Medical Officer. Salary £300. Appointment for four years.

PARISH OF LOCH GOILHEAD AND KILMORICK, N.B.—Medical Officer. Salary £70 per annum.

POPLAR HOSPITAL FOR ACCIDENTS, Blackwall, E.C.—Assistant House Surgeon. Salary £50 a year, with board and lodging.

QUEEN'S COLLEGE, Birmingham.—Professor of Therapeutics.

RAMSGATE AND ST. LAWRENCE ROYAL DISPENSARY AND SEAMAN'S INFIRMARY.—Resident Medical Officer. Salary £120 per annum (£10 allowed for substitute during annual holiday), with furnished apartments, gas, firing, and attendance.

ROTHERHAM HOSPITAL.—Resident House Surgeon. Salary £100 per annum, with board, furnished apartments, and washing, but exclusive of wine, spirits, and beer.

TEIGNMOUTH, DAWLISH, AND NEWTON INFIRMARY, DISPENSARY, AND CONVALESCENT HOME.—House Surgeon (to act as Secretary). Salary £40, with board and lodging.

VESTRY OF THE PARISH OF BERMONDSEY.—Analyst. The fee for each analysis is 10s. (Applications to be sent to Mr. Harrison, Clerk, Town Hall, Spa-road.)

WEST BROMWICH DISTRICT HOSPITAL.—House Surgeon. Salary £80 per annum, with board, residence, and washing.

Births, Marriages, and Deaths.

BIRTHS.

GIBSON.—On Feb. 14th, at Brook House, Godalming, the wife of C. J. Gibson, of a son.

GILES.—On Feb. 12th, at Albemarle House, Hounslow, the wife of Bernard Faraday Giles, M.D., of a daughter.

LAMB.—On Feb. 17th, at Palace-court, W., the wife of W. H. Lamb, M.B. Lond., of a daughter.

LEDIARD.—On Feb. 11th, at Lowther-street, Carlisle, the wife of Henry A. Lediard, F.R.C.S. Eng., of a daughter.

QUICK.—On Feb. 15th, at Pentreve, Torquay, the wife of John Quick, M.R.C.S., &c., of a son.

SCHOFIELD.—On Feb. 16th, at Camberwell House, Camberwell, the wife of Frank Schofield, M.D., of a son.

STILES.—On Feb. 15th, at Sherwood House, Hornsey-rise, the wife of C. B. Stiles, M.B., C.M., of a son.

MARRIAGES.

CANTRELL—LUCAS.—On Feb. 9th, at St. George's, Hanover-square, Thos. J. Cantrell, M.D., of Brighton, to Louisa, relict of John Lucas, Esq., late of Sydenham.

FENN—TODD.—On Feb. 13th, at the Church of St. Matthias, Richmond, Surrey, Edward Liveing Fenn, Esq., M.D., M.R.C.P., of Grey Friars, Colchester, to Edith, second daughter of Chas. John Todd, Esq., of The Terrace, Richmond.

FISHER—RINGLAND.—On Oct. 11th, at St. Margaret's, Anfield, Alexander Fisher, M.A., M.B., C.M., youngest son of Alexander Fisher, Edinburgh, to Gertrude Emmeline, eldest daughter of the late Robert Ringland, of Killyleagh, county Down, Ireland.

HURRY—HILL.—On Feb. 16th, at St. Mary Abbot's Church, Kensington, Jamieson Boyd Hurry, M.D., of Reading, to Gertrude Louisa, daughter of Arthur Hill, Esq., J.P., of Erleigh Court, Reading.

MACKAY—DARLING.—On Feb. 16th, at Wallace-green Church, Berwick-on-Tweed, by the Rev. W. Ainslie Walton, M.A., B.D., Paisley, and the Rev. James McLeish, Wooler, William Bertie Mackay, M.B., Ch.M. Edin., M.R.C.S. Eng., to Jessie Wilson, youngest daughter of Adam Darling, Governor's House, Berwick-on-Tweed.

MACNAUGHTON—PERCY.—On Feb. 16th, at the Windsor Hotel, St. Vincent-street, Glasgow, by the Rev. Dr. A. Bonar, Finnieston Free Church, Dr. J. B. Macnaughton, London, to Mrs. Agnes Fawcett Percy, 22, Glencairn-drive, Pollokshields, Glasgow.

SIMPSON—BENNING.—On Feb. 16th, at Christ Church, Tynemouth, by the Rev. H. R. Wild, M.A., Curate of Christ Church, assisted by the Rev. J. Phillips, M.A., Chaplain of Orford, Warrington, William Allan Simpson, M.B. Edin., &c., N. Shields, to Mary Isabella (Mabel), daughter of Major Charles Stockdale Benning, The Limes, Dunstable, Beds.

WILKINSON—CRUICKSHANK.—On Feb. 15th, at St. Jude's, South Kensington, Camac Wilkinson, M.D. Lond., M.R.C.P., son of Judge Wilkinson, of Sydney, N.S.W., Australia, to Jessie, daughter of the late Alexander Cruickshank, Esq., of Byron, Inverell, N.S.W., Australia.

DEATHS.

GOOLDEN.—On Feb. 15th, Francis Goolden, M.R.C.S., of the Wilderness, Maidenhead, aged 71.

PRESTON.—On Feb. 15th, at Sumner, Christchurch, N.Z., A. Chevallier Preston, M.R.C.S., aged 35. (By cable.)

RAYNER.—On Feb. 11th, at Bournemouth, Thomas Rayner, M.R.C.S., L.S.A., aged 59 years, late of Cambridge-street and Edgware-road, Hyde-park, youngest son of the late Thomas Ingham Rayner, Surgeon, of Birstall, Yorkshire.

SHERIDAN.—On Feb. 9th, at Stowmarket, Suffolk, John Wilton Sheridan, Physician and Surgeon, Stowmarket.

SMYTHE.—On Feb. 10th, at Hong Kong, Surgeon-Captain R. H. Smythe, of Glanmire, county Cork, son of the late Rev. R. H. Smythe, Rector of Carrick-on-Suir.

SYMPSON.—On Feb. 10th, at James-street, Lincoln, Thomas Sympson, F.R.C.S.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, February 22.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Tuesday, Wednesday, Friday, and Saturday at the same hour.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital: 1 P.M., Mr. Wm. Lang: Corneal Affections.—Great Northern Central Hospital: 8 P.M., Dr. Galloway: Nervous System.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. Mr. H. H. Clutton: Two cases of Arthrectomy of Elbow-joint.—Dr. Sidney Phillips: Case of Acromegaly.—Mr. Pearce Gould and Mr. Watson Cheyne: Results of Operations for Old Unreduced Dislocations of the Shoulder.—Dr. James Taylor: Case of Friedrich's Ataxy.—Dr. Ormerod and Dr. Aldren Turner: Specimens of Syringomyelia Cords. Dr. Leslie Ogilvie: Case of Floating Spleen.—Sir Hugh Beevor, Bt.: Unusual case of Osteo-arthritis.—Mr. Bruce Clarke: A case of Claw Hand produced by Pressure of a Splint on the Nerves of the Forearm.

Tuesday, February 23.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Professor V. Horsley: The Brain.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars: 4 P.M., Dr. Payne: Acne.—Bethlem Hospital: 2 P.M., Dr. Hyslop: Senile Insanity.—Charing-cross Medical School: 8 P.M., Dr. Cullingworth: Practical Diagnosis in the Diseases of Women.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—Mr. W. G. Macpherson (communicated by Mr. A. Bowlby): Antiseptic Preparations of Catgut and Silk, their Relation, Wound Infection.—Mr. Thomas Bryant: Case of Torsion of the Spermatic Cord, with Strangulation of the Epididymis and Testicle in an Incompletely Descended Organ.

Wednesday, February 24.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1.30 P.M.; Saturdays, 2 P.M. Obstetrical Operations, Thursdays, 2 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.: Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M. Surgical Visits on Wednesday and Saturday at 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. C. Theodore Williams: Pleurisy.—Royal London Ophthalmic Hospital: 8 P.M., Mr. J. B. Lawford: Intra-ocular Tumours.—Parkes Museum (Margaret-street, W.): 1 P.M., Dr. Louis C. Parkes: Hospitals.

HUNTERIAN SOCIETY.—8.30 P.M. Dr. Hughlings Jackson: Neurological Fragments. (Second Hunterian Society Lecture.)

Thursday, February 25.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

ROYAL INSTITUTION.—3 P.M. Professor E. Ray Lankester: Some Recent Biological Discoveries.

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Mr. Arbuthnot Lane: Spinal Caries and its Treatment.—National Hospital for the Paralysed and Epileptic: 2 P.M., Mr. Victor Horsley: Surgery of the Nervous System.—London Throat Hospital, Gt. Portland-st.: 8 P.M., Mr. George Stoker: Impaired Movements of the Vocal Cords.

BRITISH GYNÆCOLOGICAL SOCIETY.—Dr. Granville Bantock will exhibit Specimens showing various methods of Hysterectomy. Adjourned Discussion on Dr. Heywood Smith's paper on "Sub-peritoneal Hysterectomy."

Friday, February 26.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. C. Theodore Williams: Fibroid Phthisis.—Bacteriological Laboratory, King's College: 11 A.M. to 1 P.M., Professor Crookshank: Leprosy, Glanders (Sections).—Charing-cross Medical School: 8 P.M., Dr. Cullingworth: Pelvic Peritonitis.

CLINICAL SOCIETY OF LONDON.—Living Specimens at 8 P.M.:—Mr. Davies-Colley: A case of Repaired Traumatic Separation of the Epiphysis of the Head of the Femur.—Dr. Abercrombie: A case of Unusual Congenital Deformities.—Dr. Arthur Davies: A case of Myxœdema. Dr. Hadden: A case of Microcephalic Idiocy.—Mr. L. A. Dunn: A case of Sarcoma (?) of the Face and Neck.—Dr. Wallis Ord: A case of Microcephalus. Papers at 9 P.M.:—Mr. Bland Sutton: A case of Cholelithiasis; removal of impacted gall-stones through an incision in the common duct; recovery.—Mr. Stanley Boyd: A case of Pachymeningitis Hæmorrhagica Interna treated by Trephining.—Mr. Davies-Colley: A case of Fusiform Sarcoma of the Laminæ of Dorsal Vertebræ; pressure upon spinal cord; rhachiotomy; cure.

ROYAL INSTITUTION.—9 P.M. Sir David Salomons: Optical Projection.

Saturday, February 27.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 11 A.M., Dr. Hyslop: Alcoholic Insanity

ROYAL INSTITUTION.—3 P.M., Right Hon. Lord Rayleigh: Matter, at Rest and in Motion.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 18th, 1892.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Feb. 12	30·47	N.W.	39	38	52	47	37	--	Overcast
,, 13	30·53	N.W.	40	38	73	45	37	..	Bright
,, 14	30·35	N.W.	38	35	..	43	35	..	Cloudy
,, 15	29·49	N.W.	41	40	48	43	36	·10	Raining
,, 16	29·66	E.	29	..	68	34	27	·14	Overcast
,, 17	29·51	N.	23	..	60	34	21	..	Bright
,, 18	29·17	N.W.	27	..	60	36	23	·05	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

We cannot undertake to return MSS. not used.

RELIEF OF THE ITCHING OF MEASLES &c.

AN ointment composed of lanoline 50 parts, vaseline 20 parts, and distilled water 25 parts has been found by Dr. Klein to be a most soothing application for the relief of the itching accompanying the rashes of measles, scarlatina, and chicken-pox.

Bethnal Green.—Facts are to be carefully noted. If they show clearly that a practitioner covers an unqualified person who does all the medical attendance, and that the said practitioner signs certificates of death in cases which he has not personally attended, they should be transmitted to the General Medical Council and to the Registrar-General with a request for attention to them.

Dr. Craigie.—We have already referred incidentally to the point raised by our correspondent; but probably, as the epidemic is rapidly subsiding, there would be no advantage now in further discussing the question.

Mr. Charles Slater.—Yes.

THE MEDICAL PROFESSION AND THE LAY PRESS.

DR. MACNAUGHTON JONES has sent us the letters of the editor of a London evening contemporary, referring to an article on astigmatism which appeared in that paper, in which Dr. Jones's name and sentences from a work of his were quoted, ostensibly to impress the importance of the subject of astigmatism on the public. The greater part of the article, however, was taken up with the praises of a certain optician's glasses. In this correspondence regret is expressed that anything should have been inserted calculated to annoy or injure any professional man, and an explanation is given of the way in which the article came to be written.

Tyro.—In the By-Laws and Regulations of the Royal College of Physicians occurs the following:—"On the 10th day of April, 1876, the College passed the following resolution: 'No Fellow, Member, Extra-Licentiate, or Licentiate of the College shall be authorised or entitled by virtue of any Diploma or Licence granted by the College to assume the title of Doctor, or to append to his name the title of Doctor of Medicine, or the letters M.D., or any other letters indicating that he is a Graduate in Medicine of a University.'"

Medicus (Liverpool).—The answer must be in the negative, at all events until further light is thrown upon the subject.

Delta.—The question is still an open one, and seems likely to remain so for some time to come.

G. P. is referred to the reply given to another correspondent, who propounds a similar query.

Mr. Donaldson (Londonderry).—Yes, in an early number.

INJUSTICE UNDER THE NOTIFICATION ACT.

To the Editors of THE LANCET.

SIRS,—May I ask you kindly to give me advice on the following? Under the Notification Act I sent in a certificate to the medical officer of health to say a certain R. H—— was suffering from erysipelas. The 2*s.* 6*d.* is disallowed in my quarterly bill, and on calling on the borough accountant I find that against the entry is written, "R. H—— said he had not erysipelas." This, the accountant says, was written by the medical officer, and is signed by him. On calling on the medical officer, he informs me that the man R. H—— stated that he did not have erysipelas, and that was his reason for withholding the 2*s.* 6*d.* fee. R. H—— has since died, and I have seen his wife, who has signed a paper to state that I did attend her late husband for erysipelas. The reason I am writing this is that if the patient's word is to outweigh ours, what is the good of the Notification Act?

I am, Sirs, faithfully yours,

February, 1892. J. W.

*** We refrain from comment on the above case until time is given for a reply by the medical officer of health. If the statement of the patient is to supersede and neutralise the notification of the medical man, and the medical officer of health is to be the active agent in such a result, the notifier may well ask, What is the use of the Act? We wait for a reply.—ED. L.

C. P. M. S.—1. Unless an agreement exists with a principal by which the assistant is to receive fees for special services, such as those mentioned, the principal is entitled to whatever is earned in the practice.—2. The coroner must pay £1 1*s.* for evidence, if given in a professional capacity.—3. It is usual for magistrates to allow 10*s.* 6*d.* for each day's attendance at the police-court.—4. Our correspondent is entitled to £1 1*s.* for each day's attendance at assize. Sundays do not count. It is customary to allow second-class travelling expenses, but not hotel expenses.

Perplexed.—Such coöperation with an obvious quack is decidedly unprofessional conduct. It is not very different from that of a practitioner who is associated with an unqualified assistant not under his immediate supervision. It should be protested against by the whole profession of the town, and the protest should be forwarded, with proofs, to the licensing body whose diploma is held by the practitioner, and to the Medical Council.

Mr. J. L. Firth (Bradford).—The paper has been received, and will appear very shortly.

Dr. Hedley (Brighton).—The paper is marked for insertion.

TREATMENT OF ECLAMPSIA.

To the Editors of THE LANCET.

SIRS,—Having noticed in THE LANCET of Jan. 2nd, 1892, Dr. Leopold Roheim's treatment of eclampsia by compression of the common carotid, I beg to state that during the last four years I have often successfully practised this method, having obtained the idea when reading Solly on the Human Brain, where, in his article on "Epilepsy," he recommends ligature or compression for the fits.

I am, Sirs, yours truly,

J. B. SPEARING, L.R.C.S.I., L.A.H.

Broughton-in-Furness, Feb. 13th, 1892.

INFLUENZA.

DR. R. SISLEY, controverting the air-borne theory spoken of by Dr. Fitzgerald in THE LANCET of Nov. 7th, 1891, says he believes that teaching to be entirely erroneous. He has not seen any evidence in this epidemic and in this country that disease has anywhere occurred under circumstances which exclude the possibility of infection having been contracted from human sources. The rate of spread of influenza has a direct relation to the rate of human transit in a country. In Europe it was rapid; in India it was slow. In proof of this he quotes the report of Surgeon Roberts, of the Indian Medical Service, which gives a description of the attack which occurred in the valleys of the Hindu Kush during last autumn, and which appeared at Gilgit in December, 1890. This report states that "the evidence in favour of its having spread by human intercourse along the lines of road communication, and not disseminated by the atmosphere, is so great indeed that in this instance it seems impossible to find any support for the latter theory."

MR. JAMES PARKER writes that he has used a pill of quinine, iron, and zinc valerianate for prostration in cases of influenza with markedly good results. He thinks the prepraation is worthy of a more extended trial.

DR. E. FURNISS POTTER is of opinion that phenacetin is a most valuable drug to use in influenza as an antipyretic, hypnotic, and anodyne. He also notes a resemblance between the temperature of influenza and that of enteric fever.

DR. MOWBRAY TAYLOR has had successful results in treating influenza with a salt of picric acid—the picrate of ammonium. As the basis of his treatment he administers a saturated solution of this salt in from five to ten-minim doses, every four hours, with ten minims of the liquor morphiæ in a little chloroform water. Being a derivative of carbolic acid, he thinks it owes its success to its chemical properties as a germicide when absorbed into the system.

MR. W. J. BLACK points out that the contagious nature of influenza is referred to in Cullen's Synopsis, January, 1785, page 174, under the heading "Catarrhus e Contagio." Hooper's Medical Dictionary, 1820, states the same. Our correspondent refers also to the Cyclopedia of Medicine, 1833. The Army Medical Reports, 1859, places the disease amongst the miasmatic and zymotic diseases. Mr. Black also points out glaring instances of disregard of this old experience.

"POISON BOTTLE-STAND."

To the Editors of THE LANCET.

SIRS,—When reading in the current issue of THE LANCET an account of Mr. Menneli's bottle-stand, by which the inadvertent use of poisonous drugs may be avoided, a very ingenious electrical contrivance which I saw about two years ago in the establishment of a chemist at a well-known seaside resort was recalled to my mind, a description of which may probably be of interest to some of your readers. Under each bottle containing a poisonous substance, as it stood on its shelf, was placed a small metallic disc, which was connected by a wire with a battery. When a bottle was removed a bell was immediately rung, and continued to ring until it (the bottle) was replaced; thus giving unmistakable evidence of the fact that a poisonous drug had been touched. In a word, the action was that of an ordinary electric bell *reversed*—i.e., the bell rang when pressure on the disc (caused by the weight of the bottle) was removed, and *vice versâ*. I may mention that Mr. —— assured me at the time that the apparatus worked well, was most simple of construction, and very inexpensive. Individually, I must confess I do not see why there should be any necessity for such appliances, as, if one will only exercise ordinary care in dispensing medicines, we should not read of so many lamentable accidents in the daily papers.—I am, Sirs, yours faithfully,

H. CLINTON DAVIES, L.R.C.S., L.R.C.P. ED., &c.

Hackney, Feb. 13th, 1892.

MEDICAL CHARGES IN SOUTH AFRICA.

THE *Port Elizabeth Telegraph* has a very sensible article on a discussion in the Afrikander Bond on unreasonable medical charges in country places. The *Telegraph* is properly sceptical of the truth of such charges. The rough and long journeys to be made and the hard professional duties to be done make good charges a binding duty on the medical adviser. The value of his life and time must be considered.

Dr. W. Arthur Bullen.—A medical man notifying cases of scarlet fever is not required to specify rash or any other symptom. The Act mentions no points or particulars of diagnosis, but provides only that every medical practitioner "on becoming aware" that a patient is suffering from an infectious disease to which the Act applies "shall send to the medical officer of health a certificate stating the name of the patient, the situation of the building, and the infectious disease from which, in the opinion of such practitioner, the patient is suffering."

Mr. W. R. Goodfellow.—The decision of the magistrates was not inconsistent with physiological laws.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Messrs. Allen and Hanburys, London; Dr. Aldridge, Jullundur; Messrs. Austin and Son, Bristol; Mr. Asher, Kingston; Miss Aspinall, Malvern Link; Mr. Briscoe, Leeds; Mr. Brook, Swansea; Messrs. Barker and Son, London; Mr. Bottomley, Ashton-under-Lyne; Messrs. Burgoyne and Co., London; Mr. W. J. Black, Edinburgh; Dr. H. Blake, Yarmouth; Mr. Blackwood, London; Dr. Biddlecombe, Bath; Mr. C. J. Bond, Leicester; Mr. Burcombe, Lincoln; Mr. T. Browne, London; Mr. Bagshawe, St. Leonards; Dr. Collier, Oxford; Mrs. Campbell, London; Dr. Campbell, Garlands; Dr. Craigie, Chard; Mr. Chapman, London; Sir W. Dalby, London; Mr. C. Dent, London; Dr. Dutton, London; Mr. T. Duke, London; Mr. Duke, Dublin; Mr. Donaldson, Londonderry; Mr. Davis, London; Dr. Davies, Wrexham; Mr. H. C. Davies, London; Messrs. Drake and Gorham, London; Dr. Colcott Fox, London; Mr. J. L. Firth, Bradford; Messrs. Farmer, Lane, and Co., London; Messrs. Foster, Brown, and Co., London; Messrs. Fox and Bousfield, London; Dr. M. Granville, London; Dr. Goodall, Wakefield; Dr. Gowers, London; Mr. Gibson, London; Mr. Hannaford, London; Dr. Harford-Battersby, Lokoja; Messrs. Hockin, Wilson, and Co., London; Mr. Horton, London; Dr. Holmes, Whitefield; Mrs. Horn, Folkestone; Mr. Howden, Montrose; Mr. Hornibrook, London; Mr. Hutton, Ormskirk; Dr. J. Kerr, Bradford; Mr. C. M. Jessop, London; Dr. O. Kidd, Bromsgrove; Dr. Skene Keith, London; Mr. M. S. Ling, Saxmundham; Mr. Lucy, Plymouth; Mr. Lewis, Rainhill; Mr. S. R. Lovett, London; Mr. Lawson, Slateford, N.B.; Mr. Lord, Liverpool; Mr. Machonochie, London; Mr. Minor, Vienna; Messrs. Mason and Co., Chelsea; Dr. D. Monninger; Dr. Mudd; Messrs. Macmillan and Co., London; M. de Marschall, Paris; Dr. Maxwell, London; Dr. Sidney Martin, London; Messrs. Macnab and Co., Leith; Messrs. Mate and Sons, Bournemouth; Dr. Newton, Newtown; Messrs. Oppenheimer, Sons, and Co., London; Dr. J. Oliver, London; Dr. Orr, London; Dr. Pye-Smith, London; Mr. F. Page, Newcastle-on-Tyne; Mr. R. J. Pye-Smith, Sheffield; Mr. Pike, Gloucester; Mr. Pentland, Edinburgh; Mr. Rae, Stromness; Mr. Rajasingham, Aberdeen; Mr. R. H. Reeves, London; Messrs. Ralli Bros., Manchester; Messrs. Reynolds and Branson, Leeds; Mr. J. M. Richards, London; Messrs. W. H. Smith and Son, Manchester; Mr. Stephenson, Birmingham; Dr. Heywood Smith, London; Mr. Startin, London; Dr. Sisley, London; Mr. Sell, London; Mr. Simon, Chiswick; Dr. Slater, London; Mr. Stenhouse, Glasgow; Mr. Sampson, London; Mr. Sanders, Abertillery; Dr. G. Steell, Manchester; Dr. F. J. Smith, London; Mr. Saunder, Manchester; Mr. Standage, London; Dr. Trombetta, Messina; Mr. E. W. Taylor, London; Prof. L. Tait, Birmingham; Mr. Tiplady, Coupar Angus; Dr. Vogelsang, London; Dr. A. C. Wilson, Sheffield; Dr. Sims Woodhead, London; Mr. Windle, Birmingham; Messrs. Whitworth and Stuart, Manchester; Dr. T. P. Wright; Dr. N. Walker, Edinburgh; A. G., London; Box 280, Bristol; Solis, London; Johannis Springs Co., London; C. F. M., Dublin; Cortex, London; Merchant Banking Co., London; Secretary, Monsall Hospital; Maltine Manufacturing Co., Bloomsbury; R. R. R., London; Anglo-Swiss Condensed Milk Co., London; H. B., Bristol; Leon, London; Publisher, *British and Colonial Druggist*; Barrister; Perplexed; P. P.; Secretary, Middlesex Hospital; Medicus, Stonehouse; M.D.; W. R.; Bethnal Green; Lady Superintendent, Monsall; Tyro; Kaleside; Senex; An Honest Doctor.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Jones, Llanberis; Mr. Day, Colchester; Mrs. Bythway, Llanelly; Mr. Cook, Huddersfield; Dr. Peacock, Kingswinford; Mr. Riddle, Berwick-on-Tweed; Mr. Tully, Hastings; Mr. Fiske, Okehampton; Miss Covey, London; Dr. Crook, Margate; Mr. Breach, Newbury; Mr. Greensill, Dorset; Mr. Ager, Peterboro'; Mr. Gray, Leigh; Mr. White, Bradford; Dr. Drummond, Bristol; Mr. Morgan, Cleveland; Mr. Lees, Macclesfield; Mr. Bryant, London; Dr. Bullin, Cork; Mr. Gilyard, Bradford; Mr. Paul, Glasgow; Mr. Goodden, Bristol; Dr. Harley, London; Mr. Youle, London; Mr. Walker, Potton; Miss Goodman, London; Dr. Morton, Sheffield; Dr. Maskew, Fawley; Mr. Dames, Kensington; Mr. Tyte, Minchinhampton; Mr. Price, Shepherd's Bush; Dr. Wood, Douglas; Dr. Norton, London; Messrs. Matthews Bros., London; Mr. Greenwood, Glamorgan; Mr. Bond, Tunbridge Wells; Mr. Spencer, Aden; Dr. Murrell, London; Messrs. Bryce and Rumpff, London; Mr. Lamplough, Leamington; Mr. Griffiths, South Wales; Dr. Howard, Norfolk; Mr. Harker, Belfast; Messrs. Bullock and Co., London; Mr. Taylor, Nottingham; Messrs. Shanks and Co., London; Mr. Spearing, Broughton-in-Furness; Messrs. Benson and Co., London; Dr. Knott, Middlesbrough; Dr. Simpson, North Shields; Mr. Smith, London; Dr. Wood, Douglas; Mr. Bungay, Lyme Regis; Mr. Cameron, Bristol; Mr. Cleveland, Selby; Mr. Townley, Cheshire; Mr. Scott, Holsworthy; Dr. Tibbits, London; Mr. Laird, Birkenhead; Dr. Watson, Manchester; Mr. Armstrong, London; Mr. Wallers, Blackburn; Dr. McMordie, Belfast; Mrs. Irving, Tonbridge; Mr. Russell, Liverpool; Mr. Marshall, Clifton; Mr. Rudolf, London; Mr. Cumming, Lancs; Mr. Lerry, Oswestry; Dr. Liveing, London; Dr. McGibbon, Liverpool; Mr. Dove, Leeds; Mr. Heywood, Manchester; Dr. Moorhead, Hucknall Torkard; Mr. Tresise, Burton-on-Trent; Mr. Stedman, Godalming; Dr. Dickinson, Liskard; Mr. Thin, Edinburgh; Mr. Patterson, Hetton-le-Hole; Messrs. Woollams and Co., London; Mr. Preston, Christchurch; Mr. Welch, Kirkby Lonsdale; Kent Jones, Cardiff; M. J. D., London; Secretary, Ben Rhydding Hydropathic Establishment; M. N. O., London; Victoria Carriage Works, London; W. X. Y., London; Secretary, Sunderland Infirmary; Beta, London; O. G. H., London; Tudor, London; Lady Superintendent, Canterbury; E. A., London; Dr. H., London; Class Rooms, Edinburgh; Fairfax, London; Eccleston, London; Surgeon, Leicester; Graylings, Tonbridge; Proprietor, London; X. L. N. T., London; H. H., Forest-gate; Matron, London; E. J., Herts; Iris, London; Vernon, Sheffield; Southerner, London; Secretary, Derby Borough Asylum; K. Y., London; D. Y. F. A., London; *Bradford Observer*; F. P., Chester; Student, Wimbledon; St. John Ambulance Association; Hall, London; Medicus, London; Favo, London; Bonâ Fide, London; Ulna, Bradford; Castle, London; B. B., London; The Surgery, Birmingham; A. O. C., London; R. S. J., London.

NEWSPAPERS.—*Halifax Free Press, Montreal Herald, South Wales Daily News, Birmingham Gazette, Irish Times, Newcastle Journal, Windsor and Eton Gazette, Tasmanian News, Scotsman, Western Daily Mercury, Royal Cornwall Gazette, Hampshire Advertiser, Cork Examiner, Derby Mercury, Liverpool Courier, Port Elizabeth Telegraph (Cape of Good Hope), Euston Advertiser, Times of India, Ayr Advertiser, Commonwealth, Luton Times, Pioneer Mail, Le Temps (Paris), Durham County Advertiser, Hereford Times, Salisbury Journal, Wharfedale and Airedale Observer, Worcester Herald, Banbury Guardian, Waterford Mirror, Yorkshire Post, Liverpool Daily Post, East Anglian Times, The Newspaper Review, Insurance Record, Local Government Chronicle, Hertfordshire Mercury, Reading Mercury, Sanitary Record, Law Journal, West Middlesex Standard, Mining Journal, Weekly Free Press and Aberdeen Herald, Surrey Advertiser, Dundee Advertiser, Architect Leeds Mercury, Metropolitan, &c.*, have been received.

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